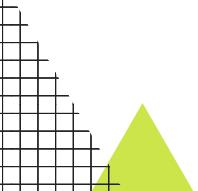


REPORT OF THE

HIGH-LEVEL ADVISORY GROUP





Report of the High-Level Advisory Group

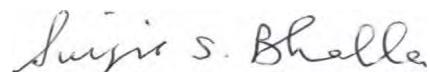


Preface

The High-Level Advisory Group (HLAG) was constituted by the Minister of Commerce and Industry, Department of Commerce, Government of India, to assess the global environment and make recommendations for boosting India's share and importance in global merchandise and services trade; managing pressing bilateral trade relations; and mainstreaming new age policy making. The HLAG deliberated upon these issues in depth and drew upon its own research as well as on presentations by its members, the industry and several departments of the Government of India. Based on its deliberations, the HLAG arrived upon certain recommendations on issues included in its terms of reference. The draft of the Report was completed in May 2019 and submitted to the Department of Commerce, Government of India. Owing to his appointment as the Minister of External affairs, Shri Subramaniam Jaishankar could not participate in further deliberations of the HLAG. It is our pleasure to present the Report to the Department of Commerce for its consideration.

New Delhi

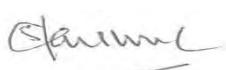
Dated: 12 September 2019



(Surjit S. Bhalla)

Chairman of the High-Level Advisory Group

Members of the High-Level Advisory Group



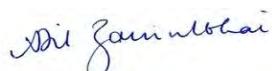
Subramaniam Jaishankar
Former Foreign Secretary



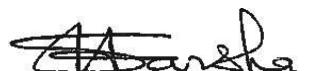
Rajeev Kher
Former Commerce Secretary
and Member, Competition
Appellate Tribunal



Sanjeev Sanyal
Principal Economic
Advisor, Government of
India



Adil Zainulbhais
Chairman, Quality Council of
India



Harsha Vardhana Singh
Former Dy. Director General
WTO



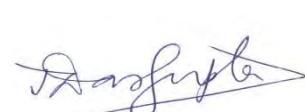
Shekhar Shah
Director General,
NCAER



Vijay Chauthaiwale
Foreign Policy Advisor



Pulok Ghosh
IIM Bangalore



Jayant Dasgupta
Former Ambassador of India
to the WTO



Rajiv K Luthra
Founder & Managing
Partner, L&L Partners



Chandrajit Banerjee
Director General CII



Acknowledgments

The HLAG gratefully acknowledges the unstinting support and contribution from the Department of Commerce, Government of India. We thank the experts from academia and industry, and the other stakeholders for making presentations from which we benefitted immensely. We express our sense of profound gratitude to the Quality Council of India for their support in preparation of this Report. We note with appreciation the support provided by the Centre for WTO Studies, Indian Institute of Foreign Trade, which was the secretariat for HLAG.

Table of Contents

TABLE OF ABBREVIATIONS	I
LIST OF TABLES	VIII
LIST OF FIGURES	X
EXECUTIVE SUMMARY	XIII
1. INDIA'S ECONOMY: MACRO AND EXPORTS	3
1.1 Measurement of India's Trade Performance	6
1.2 Macro Determinants of India's Export Performance	8
1.2.1 Mind-Set	9
1.2.2 Exchange Rate Over-valuation?	10
1.2.3 High Cost of Capital	10
1.2.4 High levels of effective corporate tax rates	11
1.2.5 Labour Laws and Firm Size	12
1.2.6 Protectionism and Customs Tariffs	12
1.2.7 Agricultural Exports	13
1.3 Policy Implications: Exchange rate depreciation vs. corporate tax cuts	13
1.4 Export growth and targets	14
2. STRATEGIC OUTLOOK	16
3. WTO AND INDIA	21
3.1 Overall Strategy	21
3.2 Domestic and International Coordination	21
3.3 Participation in WTO Discussions	22
3.4 Priority in Negotiations	23
3.4.1 Development Related Provisions, particularly Special and Differential Treatment	23
3.4.2 Plurilateral Negotiations (current or future)	24
3.4.3 E-Commerce	24
3.4.4 Investment Facilitation	24
3.4.5 Trilateral Initiative to Address China's Economic Policies	24
3.5 Conclusions	25
4. INDIA'S REGIONAL TRADE AGREEMENTS (RTAs): RATIONALE, EXPERIENCE, PROBLEMS, HURDLES AND SOLUTIONS	27
4.1 Economic, Institutional and Geopolitical Rationale	27
4.1.1 Economic Rationale	27
4.1.2 Institutional Rationale	28
4.1.3 Geopolitical Rationale: From Geo-Politics to Geo-Economics	30
4.2 India's Experience with RTAs: What has gone wrong and why - The Problems	31
4.2.1 Widening of India's Trade Deficit with FTA Partners: Sectoral Impacts and Insights Review	31

4.2.2	Rules of Origin	33
4.2.3	Standards	33
4.3	India's Experience with RTAs: The Alternative Narrative - Positive aspects	33
4.3.1	India's Trade and Trade Deficit with FTA Partners	33
4.3.2	Trade in Services	34
4.3.3	FDI in all the major FTA Partners	34
4.4	RTAs can be more beneficial: Identifying the Hurdles	34
4.5	Movement forward: Some Solutions	35
4.5.1	Integrated Approach under FTAs: Trade in Goods, Trade in Services, FDI, NTMs	35
4.5.2	Approach towards Trade in Goods	35
4.5.3	Approach towards Trade in Services	35
4.5.4	Using Trade Remedies under FTAs: Safeguards available	36
4.5.5	Data on Trade under FTAs: Utilization of FTAs	36
4.5.6	Better Inter-Ministerial Coordination, State-wise Outreach and Institutional Mechanism for Stakeholders' Consultation	36
4.5.7	Implementation of FTAs/CECAs	37
5.	THE US-CHINA TRADE WAR: IMPACT ON INDIA AND ITS POLICY CHOICES	41
5.1	Backdrop	41
5.2	Policy choices for India facing the headwinds of protectionism and description of simulations	42
5.3	Simulation Results	45
5.3.1	A US-China trade war and India	45
5.3.2	India joins an RCEP-like Free Trade Area	48
5.4	Conclusion	50
6.	INDIA'S SERVICES EXPORTS: NEED TO DIVERSIFY	52
6.1	Context	52
6.2	Services Trade: New Emerging Opportunities and Challenges	53
6.3	Leveraging India's Potential in Services Sector for Greater Export Revenue	53
6.4	Education Services	55
6.5	Health Services and Medical Value Travel	56
6.5.1	Global Industry Overview and India's Relative Performance	56
6.5.2	Global Best Practices	58
6.5.3	Potential for India	60
6.5.4	Challenges	62
6.5.5	Policy recommendations	62
6.6	Tourism and Hospitality Services	64
6.6.1	Global Industry Overview and India's Relative Performance	65
6.6.2	Global Best Practices	67
6.6.3	Potential for India	71
6.6.4	Challenges	73
6.6.5	Policy Recommendations	75
7.	FUND MANAGEMENT, ROUND TRIPPING AND ELEPHANT BONDS	80
7.1	Background	80
7.2	Round Tripping: Recommendations in Relation to Existing Legal Framework	81
7.2.1	Background	81

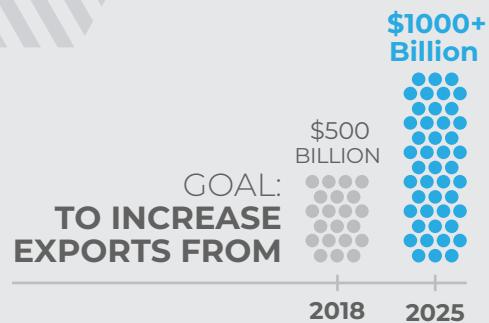
7.2.2	Current Legal Framework	81
7.2.3	Recommendations Under FEMA	82
7.2.4	Possible Suggestions Under Taxation and Black Money Laws	84
7.3	Attracting foreign individual investment into India	84
7.3.1	Key Challenges	85
7.3.2	Global Best Practices	86
7.3.3	Policy Recommendations	87
7.4	Offshore Fund Management	87
7.4.1	Offshore Fund Management as a Boost to Financial Services Sector	87
7.4.2	Challenges with the Tax Regime for Offshore Funds	89
7.4.3	Global Best Practices	91
7.4.4	Policy Recommendations for Regulatory and Tax Framework for Foreign Investment Funds and Foreign Institutional and Individual Investors	92
7.5	Reforming the Know Your Customer Framework in India	94
7.5.1	Background	94
7.5.2	Legal Framework for KYC	94
7.5.3	Global Framework and Best Practices	96
7.5.4	Recommendations	97
7.6	Long Term Bonds – A Case for India	99
7.6.1	Introduction – Issue Being Discussed and the Reasons for the Choice of the Subject	99
7.6.2	History of the Existing Policies in India and Their Shortcomings	100
7.6.3	Practices Followed in other Countries	101
7.6.4	Recommendations	103
8.	EXIM CREDITS AND INSURANCE	106
A.	EXIM CREDITS	106
8.1	Background	106
8.2	Policy Business	106
8.3	Commercial Business	107
8.4	No Ability for Growth and Policy Limitations	107
8.5	Evolving Vision	108
8.5.1	Additional equity infusion	109
8.5.2	Interest equalisation support (IES) for policy business	109
8.5.3	Review of Regulatory Norms for Exim Bank	109
8.5.4	Enhancement in the Corpus of the National Export Insurance Account (NEIA)	110
8.5.5	Trade Credit Facility (TCF)	110
8.5.6	Proposed Structure	110
B.	EXPORT CREDIT INSURANCE	113
8.6	Background	113
8.7	Regulatory Concerns	113
8.8	Export Credit Insurance in competitor countries	114
8.9	ECGC's status	114
8.10	Alternate strategies	115
9.	ENHANCING MERCHANDISE EXPORT: IN NEED OF COMPREHENSIVE REFORM	119
9.1	Background	119

9.2	Status of Exports	119
9.3	Analysis of future trends	119
9.4	Policy changes and multi-pronged export strategy	120
9.5	Strategy on Customs Tariff	123
9.5.1	Increase in tariffs reversing two decades of the underlying trade policy	124
9.5.2	The tariff regime needs to be simplified, rationalised and made more predictable	125
9.5.3	Explanation	126
9.6	Value Chain Perspective of Trade	127
9.7	Bureaucratic Reforms	128
9.8	Importance of GST	129
9.9	Conclusion	129
10. MERCHANDISE EXPORT SECTORS		132
10.1	Pharmaceuticals	132
10.1.1	Global Industry Overview and India's Relative Performance	132
10.1.2	Key Challenges Faced by the Pharmaceuticals Sector in India	132
10.1.3	Global Best Practices	135
10.1.4	Policy Recommendations (in order of priority)	137
10.2	Biotechnology	144
10.2.1	Global Industry Overview and India's Relative Performance	144
10.2.2	Key challenges faced by the Biotech Sector in India	144
10.2.3	Global Best Practices	147
10.2.4	Policy Recommendations (in order of priority)	150
10.3	Textiles	156
10.3.1	Global Industry Overview and India's Relative Performance	156
10.3.2	Key Challenges Faced by the Textiles Industry in India	157
10.3.3	Global Best Practices	160
10.3.4	Policy Recommendations (in order of priority)	161
10.4	Garments/Apparel	163
10.4.1	Global Industry Overview and India's Relative Performance	163
10.4.2	Key Challenges faced by the Garments Industry in India	165
10.4.3	Global Best Practices	168
10.4.4	Policy Recommendations (in order of priority)	170
10.5	Electronics	172
10.5.1	Background	172
10.5.2	Focal Point	172
10.5.3	India's Position	173
10.5.4	The Problem and Challenges	173
10.5.5	Best Practices around the World	174
10.5.6	What's Needed/Solution	174
10.5.7	Other Recommendations	175
10.6	Medical Devices	176
10.6.1	Global Industry Overview and India's Relative Performance	176
10.6.2	High Potential Manufacturing Segments in India	176
10.6.3	Key Challenges faced by the Medical Devices Sector in India	177
10.6.4	Global Best Practices	178
10.6.5	Policy Recommendations (in order of priority)	181
10.7	Agriculture	185

11. DATA DRIVEN APPROACH TO EXPORT	188
11.1 Overall Need	188
11.2 Details of Where Big Data can play role in Trade	188
11.3 Recommendations	191
12. INVESTMENT PROMOTION AGENCIES AND SEZS	193
A. Building an empowered Investment Promotion Agency (IPA) in India – Invest India ++	193
12.1 Global Overview and India's Relative Performance	193
12.2 Key Challenges faced by India's IPA, i.e., Invest India	195
12.3 IPAs across the world: A comparison	196
12.4 Policy recommendations to realise Invest India ++	199
B. SPECIAL ECONOMIC ZONE	201
REFERENCES	203
ANNEXURES	211

High Level Advisory Group (HLAG) on Trade

(Under Ministry of Commerce & Industry)



Macro Recommendations



Aggressively grow EXIM Bank and Credit Insurance for exports

- Enhance capital base of the EXIM Bank by **another INR 20,000 crores by 2022** and infuse the balance capital in a sustained manner
- Increase the Bank's borrowing limit to **20 times Net Owned Funds** (the current limit is 10x)
- Enhance capital base of the Export Credit Guarantee Corporation (ECGC) by **INR 350 crores**
- Exempt the ECGC from Insurance Regulatory and Development Authority (IRDA) regulation



Make Effective Corporate Tax Rates more competitive

- India should **cut corporate tax rate to 22% (with exemptions)**. This will yield an effective corporate tax rate of 18% (most of our competitors are around the 15-20% mark)



Align policy rates with competitors

- India should aim to **bring down the cost of capital to the average of 10 best performing OECD countries**. The median real policy rate of 30 countries in August 2019 (excluding Argentina, Mexico and Turkey) was minus 0.7 %, with India having the highest rate at 2.2 %.
- Transmission of lower repo rates for consumers is hindered by the operation of interest rates on savings deposits schemes by the government (small savings, special interest rates for senior citizens, etc.). There is an **urgent need to revisit these schemes. Policy operation should now fully incorporate the technology of Direct Benefit Transfers (DBT)**
- In the early 2000s, the RBI approved a policy of linking government savings schemes to repo rates. **This link should be re-established** with the

proviso that government guaranteed savings deposits have a lower than market rate of interest



Use data analytics to build a comprehensive export strategy

- Department of Commerce** should directly engage a reputed institution, outside the Ministry, which has expertise in trade, economics and big data analytics, to create an **intelligent, big-data driven prediction system**, backed with data from various sources
- Create a database that details the **utilisation of various FTAs, RTAs, CEPAs** etc.
- Use big-data analytics for identifying items at the **4-digit HS level where India has an export advantage** and building up domestic competitiveness in these products



Strengthen Investment Promotion Agency (Invest India++) and build an overall Trade Promotion Organisation

- Make Invest India the **centralised authority for issuing licenses** and **empower it to grant incentives** in cases meeting pre-defined criteria
- Make it **answerable to an apex decision-making body**, headed by a select set of Ministers who can approve investment
- Create one apex trade promotion organisation** established as a separate entity (replacing DGFT, ITPO, TCPI)
- The Body should be responsible to an apex decision-making body like the **Board of Trade**
- The funding for the TPO should be **increased to 0.18% of exports**
- Create a world-class '**war room**' to realise single-window clearance

HLAG Recommendations



Optimise FTA negotiations and usage

- Begin process of identifying and resolving **non-tariff barriers which prevent Indian exports from accessing key importing nations** – begin with major countries with which India has FTAs
- **Mainstream states** into the national trade agenda
- Undertake sectoral analysis to **assess price competitiveness of Indian products in markets of choice** to help better negotiate FTAs
- **Launch a five-year program for negotiation of FTAs identified based on complementarity and long-term sustainability.** Relevant segments of Industry must be associated with the process of negotiations
- A sustained **medium-term advocacy program** should be taken up with the industry to spread **awareness about potential FTAs and opportunities for utilization of FTAs.** The MSME sector should be the focus of such an advocacy program



Increase the number of STEM graduates to 3X, in conjunction with the private sector

- Departments at India's **Tier 1 universities** that undertake research in line with industry's and government's research priorities may be funded through a **PPP model**. By means of a **tech platform**, GoI can help **facilitate research linkages between life-sciences, IT companies etc and universities.** This platform could be modelled along the lines of donor-NGO CSR platforms (like the one developed by Goodera, for instance)
- Launch a programme that **incentivises the return of NRIs that have studied and worked abroad** in key areas like biotechnology and artificial intelligence

- Identify **10 regional clusters of Industry** and assign relevant universities/institutions in that area to them

- **Support extended to research** through Corporate Social Responsibility (CSR) may be **formalised under CSR rules**, specifically for specialised industries like pharmaceuticals and biotech



Bridge the savings-investment gap by issuing Elephant Bonds

- The HLAG estimates that creation of Elephant Bonds could help fund **~US\$ 500 billion worth of infrastructure projects**
- People declaring undisclosed income will be bound to **invest 40% with a coupon rate of 5%** for a period of **20-30 years**. The fund will be **utilised only for infrastructure projects**



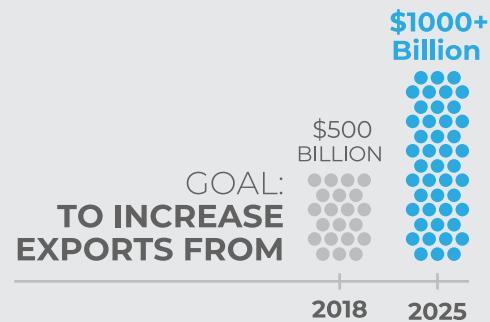
Reform the financial services sector to create jobs, increase tax revenue and bridge the savings-investment gap

- **Simplify regulatory and tax framework** for foreign investment funds and individual investors to enable on-shoring of fund management activity of India-dedicated offshore funds and attract foreign individual investment into capital markets
- Permit foreign individual investment into **Indian debt and capital markets** on an identical basis as exists under the **LRS scheme of RBI** through authorized dealers i.e. Indian and foreign banks as permitted by RBI



High Level Advisory Group (HLAG) on Trade

(Under Ministry of Commerce & Industry)



Sector Specific Recommendations



Agriculture

- States should fast track the implementation of Model **Agricultural Produce and Livestock Marketing Act, 2017**
- Availability of technology – especially **DBT (PM-Kisan)** – should be extensively used to **address shortfalls in agricultural incomes**. Use DBT for both consumers and producers. It is likely that the need for farmer and consumer income support will be less if agriculture is freed.
- Promote **export of fruits and vegetables**, instead of rice and cereals. A reformulated and free agriculture will allow our comparative advantage in fruits and vegetables to be exercised
- Facilitate **FDI in agro-processing sector**, which would help in creating back-end infrastructure like warehouses and cold-chain. **States need to formulate and implement favourable policies for attracting FDI in the agro-processing sector**
- **Simplify customs procedures** for exports by instituting 100% digitisation across ports
- **Build conformity assessment** to international standards in fertiliser and pesticide use



Pharmaceuticals, Biotechnology and Medical Devices

- Department of Pharmaceuticals' (DoP) **role to be focussed on growing industry**. The mandate of the DoP should encompass provision of capital, technological and infrastructural support
- Appoint an **empowered independent commission on Pharmaceuticals and Biotechnology** to enable coordination among various entities, currently working in silos
- **Separate regulation** of medical devices from that of drugs/cosmetics
- Create a **single ministry for the regulation of medical devices** across the entire value chain
- Rectify the **inverted duty structure** on medical devices manufacturing in India

HLAG Recommendations



Textiles and Garments

- Drive scale across the textiles and garments value chains by encouraging emergence of **large investment, consolidation of firms and enlargement of clusters**
- **Review existing FTAs**, especially with competitors like Bangladesh
- De-link Export Promotion Capital Goods (EPCG) Scheme from exports for the sector and fast-track disbursal of Technology Upgradation Fund Scheme (TUFS) subsidies



Electronics

- Shift from a tariff-based policy to an **incentive-based policy** for manufacturing of electronics in a WTO consistent manner
- The incentives to be provided by the Government to its industry players **should not be contingent on exports** and should be consistent with the WTO covered agreements
- **Establish Industrial Parks** which would cater to specific needs of the electronics manufacturing sector (similar to IT parks)



Tourism and Hospitality

- Create a **Pan-India Tourism Board** to coordinate among various parts of government and industry
- Accord **infrastructure status to tourism infrastructure** and rationalise tax rates
- Attract **Chinese tourists** who form a large percentage of outbound tourists globally



Medical Value Travel

- **Simplify the medical visa regime** (visa exemptions to nationals of focus countries, rationalise cost of medical visas)
- Push for **Health Insurance Portability** of social security entitlements across countries
- Create a **Medical Tourism campaign** to create awareness and build on India's brand as a medical value destination

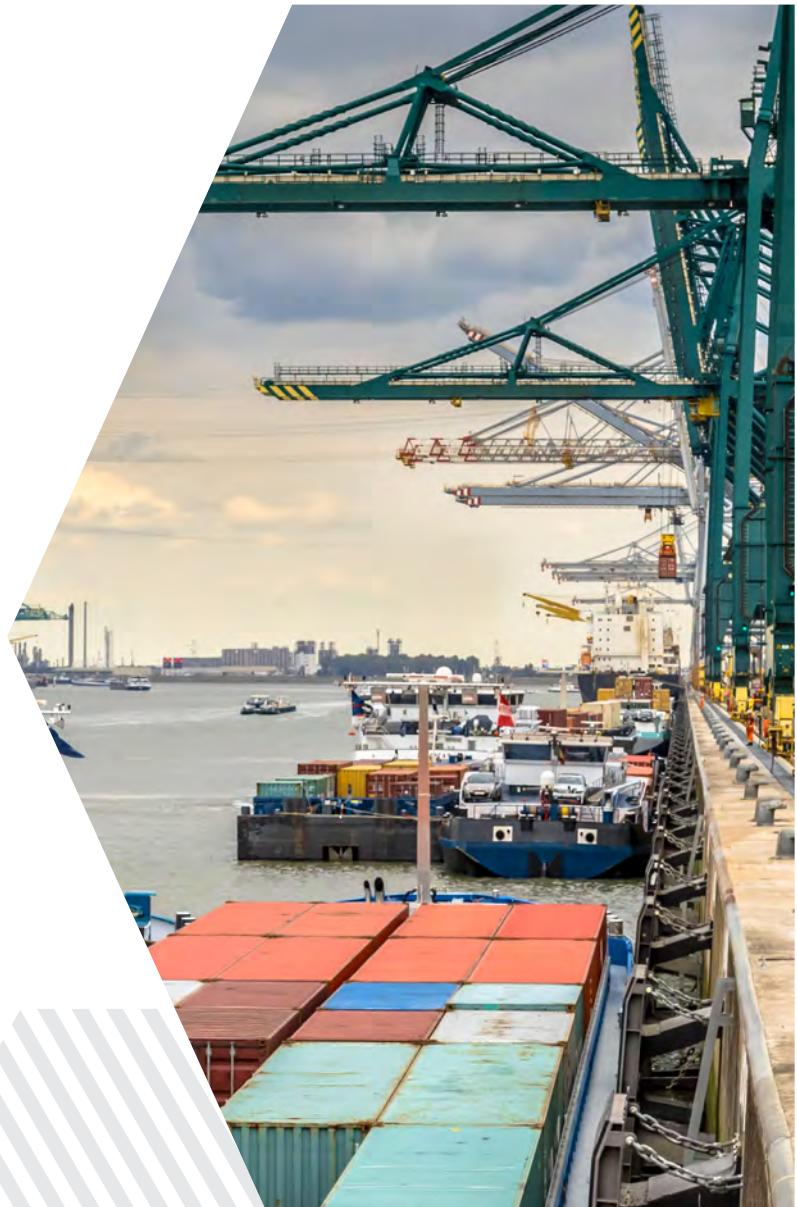


Table of Abbreviations

Abbreviation	Description
&	And
AB	Appellate Body
ADIA	Abu Dhabi Investment Authority
AEOs	Authorized Economic Operators
AiMeD	Association of Indian Medical Devices Industry
AI	Artificial Intelligence
AIF	Alternative Investment Funds
AIFI	All India Financial Institutions
AISHE	All India Survey on Higher Education
AMC	Asset Management Companies
AMFI	Association of Mutual Funds in India
AML	Anti Money Laundering
AMTZ	Andhra Pradesh MedTech Zone
ANZ	Australian and New Zealand
AOA	Articles of Association
APHM	Association of Private Hospitals Malaysia
API	Active Pharmaceutical Ingredients
APMC	Agricultural Produce Marketing Commission
ATUFS	Amended Technology Upgradation Fund Scheme
AUM	Assets Under Management
ASEAN	Association of Southeast Asian Nations
Austrade	Australian Trade and Investment Commission
BC-NEIA	Buyer's Credit under the National Export Insurance Account
BIRAC	Biotechnology Industry Research Assistance Council
BIS	Bureau of Indian Standards
BoA	Books of Account
BPO	Business process outsourcing
BR	Board Resolution
BTIA	Bilateral Trade and Investment Agreement
CA	Chartered accountants
CAG	Comptroller and Auditor General
CAGR	Compound Annual Growth Rate
CBDT	Central Board of Direct Taxes
CBI	Central Bureau of Investigation
CBIC	Central Board of Indirect Taxes and Customs
CDSCO	Central Drugs Standard Control Organization
CECA	Comprehensive Economic Cooperation Agreement

CEPA	Comprehensive Economic Partnership Agreements
CFA	Chartered Financial Analyst
CFS	Concessional Financing Scheme
CGE	Computable general equilibrium
CII	Confederation of Indian Industry
CIPA	China Investment Promotion Agency
CIS	Commonwealth of Independent States
CIT	Corporate Income Tax
CKYCR	Central KYC Register
CoI	Certificate of Incorporation
CoPS	Centre for Policy Studies
CPP	Captive Power Plant
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CRAR	Capital to Risk-weighted Assets Ratio
CRO	Clinical Research Organisation
CRS	Common Reporting Standard
CSSF	Commission de Surveillance du Secteur Financier
CVD	Countervailing duties
D&C Act	Drug and Cosmetics Act
D&C Rules	Drugs & Cosmetics Rules
Dated G-Secs	Dated Government Securities
DBT	Department of Biotechnology
DCGI	Drug Controller General of India
DEA	Department of Economic Affairs
Demat Account	Dematerialized Account
DGCI&S	Directorate General of Commercial Intelligence and Statistics
DGFT	Directorate General of Foreign Trade
DIPP	Department of Industrial Policy and Promotion
DMIA	Don Mueang International Airport
DOC	Department of Commerce
DoP	Department of Pharmaceuticals
DPIIT	Department for Promotion of Industry & Internal Trade
DTAA	Double Taxation Avoidance Agreements
EATR	Effective Average Tax Rates
EC	Inter-ministerial Empowered Committee
ECA	Export Credit Agency
ECG	Electrocardiogram
ECGC	Export Credit Guarantee Corporation of India
EDB	Economic Development Board
EDQM	European Directorate for the Quality of Medicines

EEC	Eastern Economic Corridor
EIDB	Export Import Data Bank
EMTR	Effective Marginal Tax Rates
EPCG	Export Promotion Capital Goods
EPU	Economic Policy Uncertainty
ETP	Effluent Treatment Plants
ETF	Exchange Trade Fund
EU	European Union
EURATEX	European Apparel and Textile Confederation
Exim Bank	Export-Import Bank of India
FATF	Financial Action Task Force
FDA	Food and Drugs Administration
FDI	Foreign Direct Investment
FEEs	Foreign Exchange Earnings
FEMA	Foreign Exchange Management Act, 1999
FHRAI	Federation of Hotels & Restaurants Association of India
FICCI	Federation of Indian Chambers of Commerce and Industry
FII	Foreign Institutional Investors
FIIs	Financial Institutions
FOB	Freight on Board
FPI	Foreign Portfolio Investment
FRO	Foreigners Registration Office
FSSAI	Food Safety and Standards Authority of India
FTAs	Free Trade Agreements
FY	Financial Year
GAAR	General Anti Avoidance Rules
GDP	Gross Domestic Product
GDUFA	Generic Drug User Fee Amendments
GEAC	Genetic Engineering Appraisal Committee
GFC	Great Financial Crisis
GMP	Good Manufacturing Practice
GOI	Government of India
G-Secs	Government Securities
GST	Goods and Services Tax
GTAP	Global Trade Analysis Project
GVC	Global Value Chain
HLAG	High-Level Advisory Group
IBSC	Indian Bio-medical Skill Consortium
ICMED	Indian Certification for Medical Devices
ICRIER	Indian Council for Research on International Economic Relations
ICT	Information and Communication Technology

IEC	International Electro-technical Commission
IES	Interest Equalisation Support
IEIS	Incremental Export Incentives
IFSC	International Financial Services Centre
IGST	Integrated Goods & Services Tax
IISC	Indian Institute of Science
IISER	Indian Institute of Science Education and Research
IIT	Indian Institute of Technology
ILO	International Labour Organization
IMDRF	International Medical Device Regulatory Forum
INR	Indian Rupees
IOSCO	International Organisation of Securities Commission
IPA	Investment Promotion Agency
IRAC	Income Recognition and Asset Classification
IRDA	Insurance Regulatory and Development Authority
ISAR	Indian Society for Assisted Reproduction
ISDS	Investor State Dispute Settlement
ISO	International Organization for Standardization
IT	Information Technology
ITES	Information Technology Enabled Services
ITC	Input Tax Credits
IVF	In Vitro Fertilization
JIETA	Japan Electronics and Information Technology Industries Association
KDDF	Korea Drug Development Fund
KEXIM	Export & Import Bank of Korea
KL	Klang Valley
KLIA	Kuala Lumpur International Airport
KPBMA	Korea Pharmaceutical and Bio-pharma Manufacturers Association
KRW	South Korean won
KSM	Key Starting Material
KYC	Know Your Customer
LC	Letters of Credit
LCCT	Low-Cost Carrier terminal
LDC	Least Developed Countries
LIBOR	London Inter-bank Offered Rate
LLP	Limited Liability Partnership
LMI	Logistics Management Index
LOC	Lines of Credit
LRS	Liberalized Remittance Scheme
M&A	Mergers & Acquisitions

MAH	Market Authorisation Holder
MAI	Market Access Initiative Scheme
MAI	Multilateral Agreement on Investment
MAS	Monetary Authority of Singapore
MATRADE	Malaysia External Trade Development Corporation
MDA	Market Development Assistance Scheme
MDR	Medical Devices Rules, 2017
MEA	Ministry of External Affairs
MEIS	Merchant Export for Indian Schemes
MFDS	Ministry of Food and Drug Safety
MFN	Most Favoured Nation
MHTC	Malaysia Healthcare Travel Council
MIS	Management Information Systems
ML	Maximum Liability
MNC	Multinational Corporation
MoA	Memorandum of Association
MOCI	Ministry of Commerce and Industry
MOF	Ministry of Finance
MOH&FW	Ministry of Health and Family Welfare
MoHRD	Ministry of Human Resource Development
MoTS	Ministry of Tourism and Sports
MoU	Memorandum of Understanding
MRA	Mutual Recognition Agreement
MSME	Micro Small and Medium Enterprise
MSQH	Malaysian Society for Quality in Health
MVT	Medical Value Travel
NABCB	National Accreditation Board for Certification Bodies
NBFC	Non Banking Financial Companies
NCAER	National Council of Applied Economic Research
NCEs	Novel Chemical Entities
NEIA	National Export Insurance Account
NFE	Net Foreign Exchange
NFTF	Non-Face to Face
NHS	National Health Service
NIE	Newly Industrialized Economies
NIPER	National Institute of Pharmaceutical Education and Research
NIIF	National Investment and Infrastructure Fund
NITI Aayog	National Institution for Transforming India
NLEM	National List of Essential Medicines
NMPA	National Medical Products Administration
NME	New Molecular Entities

NOF	Net Owned Funds
NPPA	National Pharmaceutical Pricing Authority
NPV	Net Present Value
NRI	Non Resident Indian
NSDL	National Securities Depository Limited
NTB	Non-Tariff Barrier
NTPA	National Tripartite Plan of Action
OCI	Overseas Citizenship of India
ODI	Overseas Direct Investment
OECD	Organisation for Economic Co-operation and Development
OPC	One person Company
OTP	One Time Password
OVD	Officially Valid Documents
PAN	Permanent Account Number
PE	Private Equity
PhD	Doctor of Philosophy
PIC/S	Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme
PIO	Person of Indian Origin
PIS	Portfolio Investment Scheme
PMGKDS	Pradhan Mantri Garib Kalyan Deposit Scheme
PMGKY	Pradhan Mantri Garib Kalyan Yojana
PMLA Rules	Prevention of Money-Laundering Rules, 2005
PMP	Phased Manufacturing Programme
PPP	Public Private Partnership
PSU	Public Sector Undertaking
PTA	Plurilateral Trade Agreement
PwC	PricewaterhouseCoopers
QCI	Quality Council of India
R&D	Research and Development
RBI	Reserve Bank of India
RCEP	Regional Comprehensive Economic Partnership
RCGM	Review Committee on Genetic Manipulation
RFID	Radio-frequency identification
RMG	Ready Made Garment
RTA	Regional Trade Agreement
RVC	Regional Value Chain
S&E	Science and Engineering
S&P	Standard and Poor Global Ratings
SA	Suvarnabhumi Airport
SBP	State Bank of Pakistan

SC	Supreme Court
SEBI	Securities and Exchange Board of India
SEC	Subject Expert Committees
SEZs	Special Economic Zones
SFC	Securities and Futures Commission
SITP	Scheme for Integrated Textile Parks
SLA	State Licensing Authority
SMC	Samsung Medical Center
SME	Small and Medium Enterprise
SNA	Segregated Nominee Account
SNAP	Segregated Nominee Account Providers
SOIF	Strategic Overseas Investment Fund
SPV	Special Purpose Vehicle
TCF	Trade Credit Facility
TERC	Trade and Economic Relations
TCS	Technology Competency Score
TPP	Trans Pacific Partnership
TPU	Trade Policy Uncertainty
TR	Technical Regulations
TUFS	Textiles Upgradation Funds Scheme
UK	United Kingdom
UKTI	United Kingdom Trade & Investment
UBO	Ultimate Beneficial Owner
UNWTO	United Nations World Tourism Organization
US	United States
USD	United States Dollar
USFDA	United States Food and Drug Administration
USPTO	United States Patent and Trademark Office
USITC	United States International Trade Commission
VAT	Value Added Tax
VC	Venture Capital
VDIS Scheme	Voluntary Disclosure of Income Scheme
WHO	World Health Organization
WOS	Wholly Owned Subsidiary
WTEx	World's Top Exports
WTO	World Trade Organization
WTTC	World Travel and Tourism Council

List of Tables

Table No.	Table Title	Page No.
1.1	World and India's Export Performance - 2003-2017	7
6.1	Sectoral growth rates and contributions to GDP	54
6.2	Composition of services exports as percentage of total service exports	54
6.3	Medical Tourism Receipts	60
6.4	Cost arbitrage vis-à-vis developed countries and other Asian peers	60
6.5	Top 10 Source Countries for Foreign Tourist Arrivals in India (2017)	72
6.6	Most Improved Countries in the Travel & Tourism Competitiveness Index (WEF, 2017)	73
6.7	Comparative Tax Rates in Asia Pacific	75
6.8	Tourism Board, Composition and Funding around the World	76
7.1	Domestic Fund Management Industry and Offshore Funds Investing in India	88
9.1	Increase in tariffs	124
10.1	Gap in Drug Inspectors	140
10.2	India's Textiles Exports (USD billion)	156
10.3	India- Percentage Cost Structure of the Yarn, Fabric and Made-ups Industry	159
10.4	Factors affecting competitiveness of India in global trade of garments	164
10.5	Scale and Logistics: Impact on Costs	165
10.6	Productivity Adjusted Wage Rates Across Key Garment Exporting Countries	166
10.7	Examples of Incentives Provided by Bangladesh, China and Viet Nam	166
10.8	Relative Tariff Advantage in the EU Market	167
10.9	Bangladesh's Fabric imports (In USD million)	168
10.10	Corporate Tax Rates across Selected Countries	169
10.11	Buyer's perception of competitive comparison between countries	170
10.12	High Potential Manufacturing Segments in India	177
12.1	FDI Equity Inflows by Country	194
12.2	FDI Equity Inflows by Sector	194
12.3	Investment Promotion Agencies Comparison	196
Annex I.2	List of Meetings	213
Annex II.1	Mapping of Model Sectors with GTAP Sectors	216
Annex II.2	Mapping of Model Country/Regions with GTAP Regions	218
Annex II.3	Change in GDP (% change from base)	220

Annex II.4	Change in Exports (% change from base)	222
Annex II.5	Change in Imports (% change from base)	224
Annex II.6	Key Macro Results for India	226
Annex II.8	Summary analysis of Indian tariffs, 2010-11 and 2014-15	228
Annex III Table III.1	JCI Accredited Organisations by Country	230
Annex III Table III.2	Government Measures undertaken by the Thai Government	230
Annex IV. I	Documents Required to Open Accounts in India	232
Annex IV.2	KYC Documents for Eligible FPIs Under the Simplified Procedure	236
Annex V.1	Loans and Advances as a Percentage of Total Exports	238
Annex V.2	Comparison of the loan assets of each Exim Bank	239
Annex V.3	Trends in Share Capital of Select Exim Banks	240
Annex V.4	Leverage Ratio of Select Exim Banks	241
Annex VI Table VI.1	Share of India's Merchandise Exports in Imports of Top 10 Importing Nations	243
Annex VI Table VI.2	World's Top Imports and India's Share, 2017	244
Annex VII.2	Exports of Top 10 Exporters of Garments in the World, Billion USD	246
Annex VII.3 Table VII.3.1	Students enrolled in MTech and PhD courses	250
Annex VII.3 Table VII.3.2	All India Postgraduate Enrolment by Discipline (2013-2018, actual numbers)	251
Annex VII.3 Table VII.3.3	All India PhD Enrolment by Discipline (2013-2018, actual numbers)	251
Annex VIII.1	Details of top 20 SEZ area lying vacant	252
Annex VIII.2	Zone-wise Notified Land area details	253

List of Figures

Figure No.	Figure Title	Page No.
5.1	Increase in GDP, Simulations 1-4 (% Change from base)	46
5.2	Increase in Exports, Simulations 1-4 (% change from base)	46
5.3	Change in Imports, Simulations 1-4 (% change from base)	46
5.4	Increase in GDP, Simulations 5 & 6 (% change from base)	49
5.5	Increase in Exports, Simulations 5 & 6 (% change from base)	49
5.6	Increase in Imports, Simulations 5 & 6 (% change from base)	49
6.1	Inbound Tourism in India: Total Foreign Tourist Arrivals vs Medical Tourists	57
6.2	Indian Medical Tourism Industry (USD Billion)	57
6.3	Tourism Receipts (in USD Million)	59
6.4	International Tourism Trends, 2017	65
6.5	Growth in Foreign Tourist Arrivals on e-Tourist Visa	66
6.6	Share of India in ITRs	67
6.7	Tourism revenue inflows (% of GDP)	69
8.1	Proposed Structure and Steps for EXIM Bank	112
10.1	Number of Biosimilars in Development by Country	133
10.2	Growth of top 10 Indian Pharma Companies' R&D Expenditure (FY12 - FY18)	135
10.3	Gross domestic expenditure on R&D by country (2000-2015; USD billion)	135
10.4	Current pharmaceutical regulatory ecosystem characterised by multiple ministries with less than optimal collaboration	141
10.5	Proposed potential regulatory framework for Pharmaceuticals	142
10.6	Plans of foreign recipients of US S&E doctorates to stay in the US (2004-2014, %)	145
10.7	All India Postgraduate Enrolment by Discipline (2013-2018, in thousands)	145
10.8	All India PhD Enrolment by Discipline (2013-2018, actual numbers)	146
10.9	Gross Domestic Expenditure on R&D, as a % of GDP (2000-2015)	146
10.10	Doctoral Degrees in Physical & Biological Sciences, Mathematics and Statistics, by country (2000-2014)	148
10.11	Number of new launches of Chinese biodrugs by registration year	149
10.12	Current biotech regulatory ecosystem characterised by multiple ministries and departments with insufficient coordination	153
10.13	Proposed potential regulatory framework for Biotechnology	154
10.14	Top Ten Exporters of Textiles, 2017 (billion USD & annual percentage change, %)	156
10.15	Annual Garment Exports of India and its Key Competitors (USD billion)	165

10.16	Export Value of Mobile Phones (USD Million)	173
10.17	China's composition of medical devices exports (2001-2016; %)	180
Annex III Fig. III. 1	Popular MVT Treatments in India	231
Annex VI Fig. VI.1	India's Total Exports 2009-2018 (in USD Billion)	243
Annex VII Fig. VII.3.1	STEM Doctoral degrees, by selected country: 2000-2014	247
Annex VII Fig. VII.3.2	Doctoral Degrees in Engineering: 2000-2014	247
Annex VII Fig. VII.3.3	Doctoral Degrees in Physical and Biological, Mathematics & Statistics: 2000-2014	248
Annex VII Fig. VII.3.4	US STEM Doctoral Degree Recipients by Foreign Nationality: 1995-2015	248
Annex VII Fig. VII.3.5	All India Postgraduate Enrolment by Discipline (2013-2018, in thousands)	249
Annex VII Fig. VII.3.6	All India PhD Enrolment by Discipline (2013-2018, actual numbers)	249

Executive Summary



Executive Summary

The High-Level Advisory Group (HLAG or the Group) was constituted by the Minister of Commerce and Industry to assess the global environment and make recommendations for boosting India's share and importance in global merchandise and services trade; managing pressing bilateral trade relations; and mainstreaming new age policy making.

The HLAG held twelve meetings during October 2018 and April 2019. The HLAG benefited from detailed presentations by its members, as well as by the industry and several departments of the Government of India. While the deliberations of HLAG focused on examining challenges and opportunities in different sectors and proposing policy and institutional changes to address them, the Group recognised the primacy of the interplay between international and domestic developments in these domains. The HLAG looked at just a few sectors in detail to derive horizontal and sector-specific recommendations.

The report is concerned with policies which are needed, macro and micro, regulatory and taxation, infrastructure development, bureaucratic interference and ease of doing business to get India to aggressively move towards its potential of export growth (and indirectly GDP growth).

I. Global Background

Global Economic challenges such as slowing global economy, rising protectionism and institutional disarray are increasing at a rapid pace. There is an air of uncertainty and unpredictability. The global marketplace has become extremely competitive and is populated by players who have mainstreamed the philosophy of globalization in their institutional psyche. Countries such as China, South Korea, industrial nations in ASEAN and several others, have acquired competitiveness in many product areas by following a *focused* policy approach on international trade.

World Inflation

World inflation has been declining since the mid-1990s. This decline was also observed in India from 1996 to 2004, but divergence occurred during 2005-2014. Today, world inflation has declined to around 2% for advanced economies and between 3 to 4% for most emerging economies. There is little to suggest that this trend will change, and most analysts, including those at international agencies like the IMF and the World Bank, see little prospect for inflation to rise from these levels. Indeed, the conclusion is that aggregate inflation will trend lower.

This structural change in the world economy has to be factored in by policy makers in their construction of macro policies.

World Economy and Trade

Before we get to the details of what needs to be done, some details about the world economy, and world trade. One major development, *the* major development, in world trade has been the collapse of growth in trade volumes, and trade values, post the 2008 Great Financial Crisis (GFC). Despite a large negative growth in world trade (*all measured in nominal US dollars and obtained from WTO*) of minus 22% in 2009, world trade rebounded strongly in 2010 and 2011 registering trade growth of above 17% in each of these years. And then, growth dropped off a cliff starting in 2012 – only 1.6% per annum over the next six years (with two years of negative growth in 2015 and 2016). Over the previous decade (2003-2012) world trade had grown at an average rate of 10.5% despite the large drop in the post-Crisis year 2009. This reality means that India is facing a very different external environment for world trade than it did just a decade ago.

Thus, one of the big trade facts confronting the world in the last seven years is the very slow growth nature of world trade in US dollars. The global outlook will remain uncertain as sentiment will be shaped by Sino-US economic frictions and protectionism in the developed world. For a nation like India that still benefits significantly from its external engagements, it

calls for a clear vision that is effectively implemented as policies. Our future is not to return to the protectionism of the past but to create the competitiveness for the future. Much of the HLAGs deliberations were focused on how to build these competitive capabilities in the near term. With suitable policy changes, India can counter the adverse impact of a slowing global economy and with simple reforms it can buck the trend.

This report on India's trade prospects and policies is not a conventional listing of successes and failures of Indian trade policy over the last 30 years. Rather, it is a constructive plea to our policy-makers of what needs to be done, what is necessary (and possibly sufficient) to accelerate India's export growth, and thereby accelerate GDP growth towards our potential of 8+ per annum over the next 11 years (till 2030). India's GDP is very close to USD 3 trillion. At an average of 7% over the next 11 years, we will be a USD 6.3 trillion economy in 2030; at 8%, a USD 7 trillion company. The relationship is non-linear; if we appreciate that, then trade reforms (both exports and imports) will accelerate our goal of becoming a more important global player.

II. History of Economic (and Trade) Policy

Importance of Trade

Trade has long been considered, and accurately so, as one of the most preferred indicators of sustained economic growth. That is because trade is a reflector of competitiveness. The world is full of examples of mediocre aggregate growth for long periods of time – and some, like erstwhile Soviet Union, of high temporary growth via planning.

The reason performance in international trade is singularly revealing is because trade involves enormous checks and balances on all the actors – the politicians, the policy makers, the implementers of policy and the entrepreneurs. Increase in competitiveness means an increase in economic growth which is sustainable.

Outlook

There is the divergence in performance of the overall economy in India (GDP growth among the fastest in the world) and export growth (for the last seven years, post 2011, somewhat on the disappointingly lower side, details below). One important reason for this divergence is that international trade still receives inadequate attention both in the government and outside. This inward focus is visible across most institutions in the public and the private sector. An economy with India's ambition and potential, having already availed benefits of significant globalization, cannot be ambivalent in its approach to globalization.

Less Protection

While on the one hand, we are critical of protectionist measures adopted by others, on the other we have ourselves adopted some protectionist policies. Protectionism is not witnessed in the rise of tariffs alone but is also evident in other measures, e.g., promotion and adoption of technical regulations, frequent imposition of quantitative restrictions, adoption of non-tariff barriers, acute reservation on opening up economy through trade agreements, discriminatory sectoral domestic policies, etc.

Positive discrimination

All products produced in the country cannot receive the same promotional treatment. But some *positive* discrimination can be helpful. Some kind of differentiation is necessary to focus our attention on those product areas which are clearly identified as winners and potential winners. This is also necessary in the background of the ongoing technology led disruption of the global marketplace. The desired economic direction and growth can only be achieved when national objectives are in line with the national potential. In a national objective driven industrialization, different Government departments cannot act in silos. The concept of 'whole of the government' needs to necessarily pervade in all that the government does. This implies that once a national objective is adopted, various departments must align their departmental function in line with the national objective and not work in different directions.

Value Chains

We need to recognize that the road to being a global player, and sustaining high growth of a major economy, is via competitiveness and trade, particularly an increasing share of our exports in global value chains. While the concentration is on exports, we must recognize that in a world with value chains, it is both exports and imports that build competitiveness or reflect competitiveness.

India has been slow in boarding global value chains - the new paradigm for industrial production in the globalized world. There has been little conscious and coordinated effort to do so at any level in the government or the industry. It is estimated that almost 70% of global production of goods and services now happens through the instrumentality of global and regional value chains. India's imports and exports of components and parts in the machinery sector has increased over the last few years. Much of this indicates greater engagement with the various production networks. Most of these are firm level efforts but very little conscious policy-based effort has gone into it. A comprehensive approach to production with the objective of increasing India's participation in these value chains is required.

III. Measurement of India's Trade Performance

Macro Inheritance

It is relevant to situate the discussion on India's performance in international trade in the larger context of India's macro-economy. India's GDP growth has accelerated to around 7% per annum, a level that was first observed for three consecutive years in the mid-nineties (from 1994 to 1996), a few years after the initiation of major industrial and trade reforms in India. For a brief period, in the early 2000s, starting 2003/4, Indian growth did accelerate to around 8.5% per annum, but post the 2008 global financial crisis, GDP growth rate has averaged around 7% per annum.

Economic reforms in India, and expectations of more reforms, means that the Indian economy can expect to be at the forefront of growth among the large economies of the world. But our policymakers have to recognize that at 7% growth the economy has been, and is advancing, at a rate below potential. If this is acknowledged, then we need to examine why our growth has been lower than potential. And this examination will lead us first to examine our performance in international trade. When we do so, our mistakes will be broadly identified, and corrective policies should automatically suggest themselves.

The HLAG committee felt that policy conclusions about trade should be made in the context of our trade performance over the last two decades. Performance in trade can only be examined by looking at performance of India *and* other countries. Comparative trade data from 2003 onwards were examined for a sample of around 60 *non-oil* producing economies with a population size greater than 10 million. The population filter was needed so that the comparison is done for broadly similar kinds of economies. The oil-economy filter was applied in order to evaluate economies facing similar external conditions.

Two time-periods were chosen. The first, 2003-2011, represents the high trade growth period, a period when world export growth averaged a CAGR of 11.5%. The second 2012-2017 is a period when world export growth was stagnant – an average growth very close to zero – nominal growth in trade in US dollars of only 0.3% per annum (see Table). Even though world trade (and India's exports) have rebounded to a level of around 10% in nominal US dollars in the last two years (2017 and 2018) there is strong expectation that world trade will converge to a lower rate in the next decade. That is what Indian policy has to assume i.e. world trade at around a 5% expansion in nominal US dollars or a 0-3% expansion in volume. This expectation underlies the urgency for trade reforms in India.

The table reports world (consisting of these 60 economies) and our absolute and relative performance for seven indicators. Relative performance is measured via rank with rank equal to 1 being the best performer. Ranks are a powerful summary statistic. It is a statistic that

explicitly incorporates changing patterns of world performance. For example, if world trade growth has collapsed (as it has), then maintaining the rank obtained in the previous high growth environment (i.e. from 2003-2011) means that even though absolute growth has declined, performance has not. Hence, ranks and changes in rank are reliable summary measures of performance and changes in performance.

The rank analysis yields some surprising conclusions. *For both GDP growth (and the real exchange rate) our performance does not change.* We were among the top 5-8 economies in both the time-periods. Note that these are both large and small economies. Among large economies our rank has improved (we have displaced China from its number 1 ranking).

Indicator	World and India's Export Performance - 2003-2017								
	2003-17 (% per year)			2003-11(% per year)			2012-17(% per year)		
	World	India	Rank	World	India	Rank	World	India	Rank
GDP growth	5.8	7.4	6	6.3	7.8	5	4.9	6.6	8
Real Exchange Rate		97.4	6		97.1	6		97.8	5
Agriculture	7.3	11.6	12	11.6	17.9	11	0.9	2.23	30
Manufacturing	6.3	11.4	14	9.8	17.7	16	0.9	2	25
Goods	6.9	11.9	12	11.8	19.9	10	-0.5	-0.2	38
Services	7.3	15	4	10.1	21.8	6	3.2	4.8	23
All Trade	7	12.9	10	11.5	20.5	10	0.3	1.5	33

Source: WTO, BIS

Notes: Analysis based on a sample of around 60 non-oil exporting countries, all with population greater than 10 million.

However, no matter what the sector – Agriculture, Manufacturing goods, Goods (Merchandise), Services and All trade – India's ranking is lower now (between 2012 and 2017) than before.

Agriculture: a deterioration in rank from 11 to 30.

Manufacturing: a lowering of rank from 16 to 25.

Merchandise goods: the sharpest deterioration, from 10th in 2003-11 to 38 in 2012-2017.

Services: Even the rank in services exports growth performance has declined – from 6th in 2003-11 to 23rd in 2012-17. In terms of all goods and services exports, Indian exports grew at 21% in 2003-11; between 2012-17, the growth has fallen to just 1.5% per annum. Note that for both time-periods, Indian share in world trade is increasing (albeit slowly) because our growth is faster than the world average.

Thus, India has to deal with an additional truth. Most importantly, the fact that our *relative* trade performance has worsened precisely at the time that *absolute* levels of world trade growth have collapsed. We need to examine why.

Export Targets – Realistic?

India's share in global merchandise exports was 1.7% in 2017, and the services share 3.4% (WTO data). Aggregate export share in world exports has been on a marginal upward trend and has plateaued in the 2 to 2.1% range since registering a local peak of 1.8% in 2010.

With this aggregate backdrop, the government has set a target of doubling of India's exports by 2025. How realistic is this target? One method is to evaluate prospects in terms of historical, aggregate elasticities. For the longish period 1996-2017, the aggregate elasticity of Indian export growth with regard to world export growth is 1.18. This places India among the top 5 countries among comparable economies. China's export growth elasticity has been a bit higher at 1.25. In goods, India's elasticity has been 1.13 vs. China's 1.33; in services, Indian elasticity is the highest at 1.6 versus China at 1.27.

It is reasonable to assume that we can increase the long-term average elasticity to approximately equal that of China i.e. 1.25. However, in order to achieve this goal, *exporters* and the government would need to work closely in tandem. While the exporters and producers have to take action to enhance cost competitiveness, the government can assist by streamlining regulatory requirements and making other policy changes (e.g. reforming labour laws, and reducing corporate tax rates, and reducing the cost of capital).

We should be aware that elasticity is the multiple over world trade growth. While this multiple can be increased by appropriate policies, India cannot affect the magnitude of world export growth (in nominal US dollars). This growth is unlikely to average more than 8% over the next decade. But with an enhanced multiple of 1.25, the export growth target of 10% a year for India, or a doubling about every seven years, is realistic.

IV. Macro Determinants of Export Performance

What are the prime causes for India's relative performance? In our deliberations with government officials, industry, and academics, the following causes were mentioned, and in order of importance. An old, unsuited and un-reformed mind-set; extreme regulatory controls; labour laws in need of urgent reform; high effective corporate tax rates, and the high cost of capital.

None of the above five determinants have really changed in the last twenty years, yet our performance has appreciably worsened. How has this happened? Most likely, because the world has become a lot more competitive and inherited comparative advantage is no longer in the nature of low-hanging fruit. Countries around the world have recognized this reality

and have engaged in lowering taxes and regulatory controls. India has been slow to adapt. This needs to be recognized; and recognition of the underlying causes will help us to improve.

We will now examine each of the constraints to our export performance in some detail.

i. Mind-Set

In our deliberations with officials, the mind-set received prominent attention. Many claimed that an underlying cause of slow change was because the policy-makers had not adapted fast enough to a changing world environment. As documented above, growth (export and GDP) has undergone radical change – in particular, a slowdown of historical proportions in world trade. All countries have had to emerge from the unduly comfortable zone experienced during 2003-11. We need to examine whether our risk-averse mind-set (some would say a mind-set bordering on paranoia) has led to our worsening trade performance.

What do we mean by the mind-set? It is the centuries old desire to control the flow of events. And in India the mind-set has been particularly obstinate and risk-averse. A not untrue description of the attitude would be that road building is avoided because of the fear of an accident.

India for a long time had cocooned itself in protectionist import substitution policies and opened its economy much later in the early 1990's. Our gains from liberalization of economic policies and free trade have been significant but there is a manifold potential for further growth. One of the major stumbling blocks in achieving this potential is a mind-set, which still comforts itself in the pre-90's protectionist paradigm.

This mind set is visible not just in the governments at the centre and state but is widely noticed in different segments of national economy. There is no doubt that slow growth in logistics and infrastructure besides absence of trade facilitation reforms have helped in motivating and sustaining this old mind-set. There is a burden of legacy also. The Indian economy almost in all sectors is multi-layered, where traditional and the modern coexist. The mind-set needs to change.

Nations which have participated in international trade significantly have built robust national economies. In the year 2000 India's international trade constituted approximately 19% of the GDP. This rose to 55% in 2011 and thereafter came down to around 45% at present. It is quite apparent that India has significantly benefitted from its globalization efforts and today international trade contributes almost a quarter of the GDP. Note also the close correlation between expansion (contraction) of trade and acceleration (deceleration) in GDP growth.

ii. Exchange Rate Overvaluation?

It is often (most often) contended by experts that yes, Indian exports have performed badly but it is due to our exchange rate policy. As discussed earlier (Table), this is at best a bad (and untrue) excuse. India's real exchange rate index (BIS) between 2003-12 was 97.1; between 2012-17 it has averaged 97.8. Countries that have really performed well (Bangladesh and Viet Nam) have seen a large *increase* (over 30%) in their real exchange rate. As has China (28% appreciation), as has Philippines (21%) and Thailand (10% appreciation).

While one view could be that devaluation of the currency could enhance exports, our analysis shows that this may not be a viable option, or an effective option. No large country (apart from China) has been successful in enhancing exports by depressing its currency and this was only possible till around 2010. The latest US-China tariff war is indeed a reflection of the reality that unilateral devaluation is no longer possible. Indeed, our analysis shows that India's real exchange rate depreciated by only 4% in 2018 whereas the normal exchange rate depreciated by close to 10%. And several of our competitor countries also had a lowering of the real exchange rate by around 5%. Hence, zero advantage from nominal currency depreciation.

Long-term data (see Table) shows that the real exchange rate in India has stayed constant over the last two decades – no evidence that lack of depreciation was a factor in explaining fast export growth between 2003-2012. On a real exchange rate basis, the Indian rupee is one of the most competitive currencies in our sample of 60 countries – with a rank of 5th or 6th with 1 being the most competitive.

iii. High Cost of Domestic Capital

Indian industry (and to a lesser extent services) loses out in the competitive race because Indian producers face a very high cost of capital. Over the last five years, the real repo rate has averaged over 2 – 3 % per annum – or an increase in real rates of over 3 – 4 percentage points over the high export growth period. The real policy rate today (and the last several years) is the highest ever observed in India, and the highest in our sample of 60 countries. This is not the case with our competitors because the median real rate in the world has stayed broadly constant at around 0.8% per annum for emerging economies, and somewhat lower for advanced economies.

iv. High Levels of Effective Corporate Tax Rates

Apart from paying nearly the highest cost of capital, Indian corporates face nearly the highest effective corporate tax rate in the world. Effective tax rate is defined as the tax actually paid to the income (profit) earned by a corporate. In 2017-18, the effective corporate tax rate in India was around 25%.

The World Bank's Ease of Doing Business has a relatively ignored section on corporate taxation. It provides the percent of revenues obtained by a firm after payment of three components: Profit tax, labour tax and contributions (wage payments) and other taxes (indirect e.g. GST). Among twenty large emerging economies, India was ranked as the fourth highest payer of corporate taxes. Retained earnings (after payment of wages and taxes) were 44% of income in India, compared to a retention rate of 62% for Viet Nam and 66% for Bangladesh.

v. Labour Laws and Firm Size

A very likely determinant of slow export growth is our labour laws which hinder expansion in firm size. Making labour laws more flexible would enable firms, particularly in labour-intensive sectors, to scale up. What else can policy intervention seek to achieve to make the firms more efficient? As the report discusses, the government can intervene through suitable changes in taxation structure, streamlining regulatory mechanisms and providing incentives in a WTO compatible manner.

vi. Protectionism and Customs Tariffs

After consistently following the strategy of gradually reducing Customs Tariffs for over two decades under different governments, and with tariffs remaining largely low and stable, India's average MFN tariffs increased in 2017. This was followed by a further tariff increase, both as announced in the 2018 Union Budget and later again in 2018. This trend needs to be arrested and reversed, with a return to a strategy of generally lower and simplified tariffs to improve the ability of Indian exporters to link up with rapidly evolving global value chains.

India's tariff structure should be rationalised, simplified, and made more predictable. Both the upper range of tariffs and the number of tariff rates should be reduced over a five-year period. The average MFN tariff for non-agricultural goods should be phased down and reduced to a single digit, closer to the current trade-weighted tariff average. The so-called nuisance tariffs (up to 2 or 3 per cent), which serve little purpose, should be reduced to zero over a three-year period. In certain very limited number of cases, particularly new technology products, basic customs duties may need to be temporarily increased to provide domestic industry with a pre-announced specified time to become competitive, and the tariff rates decreasing each year towards a lower rate before the increase. *This should be done after transparent consultation and consideration of the impact of the tariff increase.*

V. Broad Lessons from the past

Rapid evolution in technology, particularly the increasing digital content, is having a profound influence on the manufacturing sector, and will more significantly impact the relative competitiveness of exports of goods in the future. Policy formulation should give attention to this reality. Further, trade policymaking should take into account the need for Indian firms to link into global value chains - an aspect that has not been addressed in a comprehensive manner through appropriate trade and industrial policies. In addition, an integrated approach towards trade in goods, trade in services and investment is necessitated by global and regional value chains.

Lessons from the policy approach of major competing economies, together with an identification of major obstacles and operational constraints within India, form the key elements of the framework to support specific sectors. In this context, a prominent financial support incentive used by major competing economies is a low corporate income tax rate, with exemption or large reduction of this tax for new investment in specified areas or sectors.

In our interaction with different Ministries/Departments of the Government, it became clear that certain aspects of good governance also need to be strengthened. First, big data analytics can be harnessed to enhance the capacity of *evidence-based* trade policymaking. Second, a well-structured Management Information System is required to enable policymakers to take quick decisions and provide timely policy responses to emerging challenges. Third, there is a need to create more effective institutional mechanisms for enhancing the co-ordination between domestic policymakers and those abroad, particularly in markets of India's significant export interest.

In order to partially neutralise the cost disadvantage suffered by exporters on account of infrastructural deficiencies, the government has been implementing a slew of incentive schemes. However, we may be spreading our resources too thin through such 'across-the-board' schemes. Instead, there is a need to carefully identify champion or leading sectors which can be provided facilitation to ease business operations and financial support in a WTO-compliant manner, as is being done by governments of our major competitors. A significant part of such facilitation would become part of the overall policy approach itself.

VI. Sectoral Trend in India Exports

i. Agriculture

For various reasons, agriculture has not received much reform attention. Indeed, it can rightfully be said that agriculture has escaped any change during the period of economic

reform post 1990. This lack of attention is reflected in our worsening performance as measured by the change in rank – from 12th (2003-11) to 30th (2012-17). A strong policy recommendation emerging from our deliberations is the need to dismantle the Agriculture Produce Market Committees that are still functioning as great barriers to price discovery and are perpetuating the exploitation of farmers by vested interests. This we believe is a necessary starting point for expanding a sector which must receive primary attention. This domestic policy change must be accompanied by predictability and stability in policies regarding import and export of agricultural products.

We need to recognize the changing structure of agricultural exports, and the urgent need to adjust to the relative scarcity of water and the exigencies of climate change. For example, horticulture and fruits and vegetables can become major export items. This will involve, on a priority basis, the provision of appropriate grading and sorting facilities, warehousing, refrigeration and transportation. Regarding fruits and vegetables, R&D push is needed to develop high yielding pest resistant varieties.

While it is important to exploit the untapped potential of agricultural exports, we need to remember that India is supporting roughly 18% of the human population and 15% of the animal population of the planet on only 2.4% of the land and 4% of the world's water resources. Keeping in mind that certain regions in India are already water stressed, we need to husband our water resources prudently. Thus, excessive growing and exporting products of water intensive crops like sugarcane needs to be discouraged. Also exporting large volumes of rice, which is being grown in some important areas in northern India by exploitation of ground water, needs to be similarly discouraged.

ii. Services

Between 2003-2011, service exports (WTO data) grew at a CAGR of 22% per annum, world service exports at 10.1% per annum, and our rank was 6th in the world. Between 2012-2017, world services trade grew at only 3.2% per annum. However, ten countries have shown double-digit growth (including Philippines and Thailand), and Bangladesh and Viet Nam have a CAGR almost double India's CAGR of only 4.8% per annum. We are now a middling service exports economy, with a rank of 23, a steep decline from #6 just a few years earlier (again, this is for non-oil economies with a population greater than 10 million). If world trade slows down, India is likely to witness lower growth as well. But our change in rank should warn us about the need to examine the reasons or policies that led to this disappointing relative performance.

VII. India's Trade Policy: WTO and FTAs

i. India and WTO

India should use WTO as part of its overall strategic vision on growth and interaction with the international economy. In this context, while some parts of WTO are not functioning well (e.g. dispute settlement and negotiations), others are operational and should be used for improving trade prospects and conditions for the country. In light of this, the following recommendations:

1. There should be a balance between issue specific approach and coalition building. India should interact in discussions/negotiations on issue specific basis. To manage the overall policy initiative, it is important to constitute an inter-ministerial group to mainstream international trade related issues - particularly to disseminate and evolve national official thinking on WTO related issues, as well as the global trade agenda that India needs to follow. In this context, the Trade Policy Division and other related parts of the Government should be strengthened to further support the officials participating in WTO and other trade related initiatives abroad.
2. We need to domestically prepare for the ongoing changes in the international trade regimes occurring through FTAs, irrespective of whether we are directly participating in the negotiations.
3. Taking a general stand against pluri-laterals would not be appropriate. India would need to consider each initiative on a case by case basis, taking account of the relevant objectives, and the conditions and flexibilities that will allow the process to move forward.
4. There are two options pertaining to E-Commerce. One option is that India should participate, but more for information gathering and raising concerns. There are a number of areas where India is not in a position to agree especially because the future evolution of e-commerce and related technologies is not clear. The second option is to not participate but prepare for changes that are going to arise in the regulatory operational context due to FTAs and pluri-laterals, and to stay connected with these markets and developments.
5. Investment Facilitation - India does not participate on grounds that this is beyond the mandate, and the fear that it will end up negotiating market access and Investor State Dispute Settlement (ISDS). India should examine the possibility of participation if this can lead to an agreement which affirms what is domestically being done and such participation also helps India seek additional objectives in other areas of interest in WTO.
6. Trilateral Initiative to Address China's Economic Policies - India should actively participate and engage in the discussion/negotiation on subsidies, and on State-Owned Enterprises. Regarding Intellectual Property Rights, India should keep a watchful eye on developments.

ii. India and FTAs

A perception has grown in India that Regional Trade Agreements (or FTAs) have not benefitted India and trade partners have grown at our cost. This needs to be tackled urgently. There is no doubt that in the short run the trade partners such as Korea and Japan have gained more than us. However, that speaks only half the truth. In view of the stalemate in the multilateral trading system, the role of global value chains in economic development of a country, criticality of technology and investments in a developing economy and the imperative of seeking market access by negotiating multi-layered regulatory environment in partner countries, the role of regional trade agreements (or FTAs) has become crucial in the foreign trade policy of India.

Several actions are required to pursue gains from FTAs. In order to expand markets, selection of appropriate trade partners is of critical value. Long term economic interest should drive the selection of a trade partner. Principle of complementarity is the bedrock for partner selection. India should launch a five-year program for negotiations of FTAs identified based complementarity and long-term sustainability. Relevant segments of Industry must be associated with the process of negotiations.

Market access negotiations need to go deeper than simple tariff negotiations. Aspiration to board regional value chains should determine the development of rest of the eco-systems between the trade partners. The negotiating architecture requires review to ensure availability of best knowledge and informed capacities for negotiations; this review process may be kickstarted by identifying and resolving non-tariff barrier issues faced with India's major FTA partners.

A comprehensive yet selective and inclusive approach aiming India's interest in the long-term is required. Every FTA must be conceived with a view of achieving national objectives and not driven by narrow considerations, sometimes even driven by political expediency.

While negotiating market access for goods in FTAs, India should focus on both tariffs and non-tariff barriers in the partner countries. In services, India should go beyond Mode 4 (movement of persons), and also focus on Mode 3 (commercial presence), as Indian investors have an interest in investing in the FTA partner country.

There is a need to establish an institutional mechanism for seeking inputs from stakeholders prior to finalising an FTA, as well as informing the industry well in time about any steps that they would like to take during the period of transition with the aim of minimizing their adjustment costs. Further, the Government needs to undertake comprehensive outreach programs for explaining the opportunities for exports, particularly to MSMEs, in the markets of FTA countries. A sustained medium- term advocacy program should be taken up with the

industry to spread awareness about potential FTAs and opportunities for utilization of FTAs. The medium and small sector should be the focus of such advocacy program

VIII. The US-China Trade War: Impact on India and its Policy Choices

Doubling of exports in six to seven years is a challenging target. This raises the question of whether there are unexplored strategic opportunities in the current global trade situation, including in the looming US-China trade war, which can help India either achieve these targets or at least ensure that there are no significant reversals on the path to achieving them.

A study by the National Council for Applied Economic Research (NCAER), provides the following insights:

1. In a bilateral US-China trade war, while both the US and China stand to lose in terms of GDP, exports and imports, India stands to gain if it does not face higher tariffs as a result of the trade war.
2. India stands to lose when the US-China trade war results in higher tariffs on India from both countries. India's losses increase further when India responds by increasing its tariffs on imports from the US and China.
3. A hypothetical RCEP-like free trade area, when the US and China are not fighting a bilateral tariff war, turns out to be beneficial for all member countries, particularly for India.
4. India gains even more from joining the RCEP-like free trade area when the US and China are indulging in bilateral trade war.

In light of this, the following recommendations/observations are made:

India needs to give high priority to undertaking quantitative, rigorous, computational, model-based research on strategic trade policy, including studying the impact of participation in plurilateral trade agreements. All large economies have such capacities in their research institutions and even in government.

A knee-jerk, tit-for-tat approach on tariffs may not be the soundest one to pursue without greater examination if India faces greater tariffs. It would not be sensible for India to raise tariffs in a US-China trade war. In fact, reducing own tariffs would be a wiser step.

IX. Exports – Sectoral Reality and Suggested Policy for Services Exports

i. Education Services

Amongst the developing countries India is a major hub of foreign students. Education services hold immense potential, provided the Government is able to address the critical issue of quality and improving regulatory transparency. With the growing private sector investment in the sector, the Indian higher education system has emerged as one of the largest in the world. Over the past decade, the number of universities in the country has increased at a CAGR of 7.5% (from 272 to 556) while the number of colleges has grown at a CAGR of 11% (from 11,146 to 31,324).

While amongst the developing countries India is a major hub of foreign students, further policy support could make India the global hub of education service providers. There were officially only 45 thousand foreign students enrolled in India in 2015-16, the latest year for which data is available from the All India Survey on Higher Education conducted by the Ministry of Human Resource Development. In contrast, in the same year, US had more than 1.2 million foreign students and Australia had 645 thousand international students enrolled.

ii. Health Services

The healthcare sector is expanding rapidly in India. This sector is predominantly privatized with almost 75 to 80 percent of hospitals being managed by the private sector. This sector is expected to grow at a CAGR of 15 per cent and will reach around USD 280 billion by 2020.

Within healthcare, the Medical Value Travel (MVT) sector shows immense potential; between 2012-2018, the sector grew at a CAGR of 20%. It is estimated that India will (can) account for 6% of the global MVT market share by 2023. There is a need to identify and implement specific policy support initiatives, which could make India the global hub of education and health services.

Increasing the number of pure sciences Master's and PhDs at IITs, IISERs, IISc and other Tier 1 institutions to 3x will enable India to effectively diversify into higher value added within the healthcare sector. At present, the number of students pursuing post-graduate education in Engineering outstrips those pursuing Biotechnology, Genetics, Chemistry, Statistics and Mathematics. This supply side crunch affects India's ability to compete effectively in the emerging IT fields of Artificial Intelligence, Machine Learning, Biotech, Pharma, Medical Devices.

India must consider significantly simplifying the process of applying for a medical visa, if it is to realise its potential as an MVT hub. Provision of visa exemptions to nationals of focus

countries (especially other South Asian countries) travelling to India for medical purposes could be a first step in this direction. Creating a Medical Tourism Campaign, within the Make in India Campaign will help actively promote India's image as an MVT hub. India can also legitimise and accredit medical tourism professionals who help match patients internationally with treatments in India.

iii. Tourism Services

India seriously lags behind other developing countries of similar or lower tourism potential in foreign tourist arrivals. Tourism is a service industry with significant job creating potential at multiple skilling levels, both directly in tourism and in other allied supply chain industries. Its foreign exchange earning potential needs to be given prominence, with policies and programs shaped to double or treble tourist arrivals in the next five to ten years. Reforms to enhance the personal security of tourists, upgradation of tourism infrastructure, lowering of tax rates to encourage investment, enhancing business operational and hospitality skills in rural areas, and improving the research base in analysing tourism data are needed.

iv. Financial Services Policies Involving Capital Inflows and Outflows

Based on presentations made to the committee, the HLAG noted that a key driver of stringent financial services regulations and controls related to capital inflows and outflows was to prevent round-tripping; beyond that, the basis for regulating financial services flows was not clear. India is a huge and expanding market – yet all our big investors are foreign firms, primarily managed by Indians living abroad. They choose to reside abroad as income tax laws impose restrictions on them practicing in India (e.g. permanent establishment law). However, tax laws are not the best tools to prevent round tripping at a time when emerging technology tools and KYC rules offer better means to track international money trails.

The term 'round tripping' has not been specifically defined nor has the term as a concept been explained under the regulatory framework in India. Some conceptual basis exists in laws governing foreign exchange, taxation and black money. However, the authorities have always raised concerns around investment arrangements resulting in round tripping of funds, leading to stringent regulations and heavy scrutiny around such arrangements. A few egregious examples are given below:

a. Foreign Direct Investment (FDI)

FDI through Overseas Direct Investment (ODI) is not a *bona fide* business activity in terms of the provisions of ODI Regulations. This stringent view adopted by the RBI under the objective of preventing 'round tripping' of funds has impacted abilities of certain Indian companies

which have made ODI outside India to attract FDI in India even for legitimate and *bona fide* business purposes.

b. Offshore Fund Management

Despite CBDT “freeing” the sector, there has limited impact on the ground due to stifling eligibility conditions in Section 9A of the Income Tax Act, 1961 to avail the safe harbour provisions. The 17 eligibility conditions are extremely stringent, open to varied interpretations, incoherent with offshore funds’ structure/investment pattern, and impose dual compliance burden. This is because offshore fund investors are also required to comply with SEBI and RBI regulations that monitor round-tripping and direct/indirect investment and end-investors (including residents) in FPIs. Eligibility conditions such as aggregate participation/investment by Indian residents in an offshore fund shall not exceed 5% of the fund corpus; and the fund manager is not an employee or connected person of the offshore fund, should be revisited.

c. Foreign Individual Investment

India needs foreign capital for domestic investment. One such source of capital is inflows into our capital markets from individual investors abroad. However, the market entry process and operational aspects for such investors remain extremely prohibitive and tedious with several regulatory restrictions and onerous tax and compliance requirements – because of fear of round-tripping. On the other hand, regulations for Indian individuals investing abroad are far more liberal. India allows its citizens to remit USD 250,000 abroad, per year, per person through the Liberalized Remittance Scheme (LRS) - a policy that has been in existence for over a decade.

v. Policy Recommendations for Financial Services

The baggage of round tripping cannot be used to stifle a major sector any more than using the risk of a traffic accident to stop construction of a key highway.

Today, technology, KYC and international co-ordination can help alleviate concerns on various issues related to tax evasion, black money and round-tripping and make it possible to implement simple and open policies for financial services. Such financial services policies are imperative to make India one of the most transparent and open financial markets in the world, improve the Ease of Doing Business, and provide an impetus to financial services exports.

a. Regulatory and Tax Framework for Fund Management and FPIs

Today, one of the major regulators pertaining to financial market inflows is SEBI. SEBI is a member of the International Organisation of Securities Commission (IOSCO). This is one of the major associations of regulatory bodies in the world with around 127 members. In addition, SEBI has signed bilateral memorandums of understanding (MoU) with securities market regulators of around 49 countries for enhancing cooperation and exchange of information for regulatory and enforcement purposes. Technology is a big player in this co-ordination via instant transfer of funds and communication. What makes the circle complete is availability of PAN, Aadhar and mandatory KYC international regulation and implementation.

Elements of the Open Policy – In place of the existing framework, the regulatory and tax framework below provides a new blueprint for foreign investment funds and foreign institutional and individual investors:

The foreign investor entity (AIF, FII, Pension Fund, etc.) has to be registered with the home country regulator. No requirement of the place of residence or deemed resident is necessary. The entity and the fund manager are free to operate from any physical location as long as the entity in question is registered with a regulator who is a member of IOSCO or a regulator with whom SEBI has a bilateral agreement or MoU. SEBI shall take steps to enter into bilateral agreement or MoU with jurisdictions currently not covered.

The fund and fund manager have to be fully compliant with all KYC and other requirements of the home country and must complete KYC in India with SEBI along with a mandatory PAN.

SEBI would effectively be the centralised agency for non-compliance or violations like CBI, ED and other agencies report matters to Interpol, i.e. any non-compliance of fraud etc. would be reported by SEBI under the IOSCO pact or such other bilateral agreements with Regulators overseas (who may not be members of IOSCO).

The entity would be entitled to the tax treatment as agreed in the Double Tax avoidance agreement, and the accounting firm along with a lawyer in India would be responsible for compliance certificate on inward and outward remittance.

In case the entity and fund manager are registered with SEBI and compliant with SEBI regulations, there would be no tax residency risk in India for such an entity even if its fund manager is located in India.

No outward remittance would be permitted by the Bank (Authorised dealer) without the Chartered Accountant certification on Tax treaty and tax compliance. Similarly, the Fund Manager is responsible for signing documents and ensuring compliance with tax laws.

SEBI would ensure registration of the Fund Manager in stipulated time as it does for other intermediaries in India. However, a strict 21 days limit would be prescribed for SEBI to ensure

no bureaucratic delays happen for registering (KYC) the Fund Manager and the concerned entity. This obviously applies to those applicants who are fully compliant and SEBI does not raise any query for additional information.

Foreign Individual Investors will be allowed to invest into India through authorised dealers i.e. banks, both Indian and foreign as permitted by RBI, subject to fulfilling the requirements of KYC and a simplified PAN application process (currently underway through online portals) in compliance with applicable laws. They will only be allowed to invest in debt and equity (and not real estate, etc). These inflows will be subject to the same regulation as at present for imports of financial services (i.e. sending money abroad by Indian individuals) and financial institutions/authorised dealers would facilitate the on-boarding and trading activity of such investors, including registration, withholding applicable taxes and filing tax returns.

b. Attracting Capital for Infrastructure: Long Term Bonds

As per the Economic Survey 2017-18 (Economic Survey), India will need about USD 4.5 trillion in the next 25 years for infrastructure development. In spite of the Government exploring various options, massive shortfall in infrastructure financing remains. There is a gap in the market for specialised security product the proceeds of which will only be applied towards addressing the infrastructure requirements. The proposal for application of undisclosed wealth towards subscription of Elephant Bonds (detailed below) can be utilised to help alleviate the dual problems of black money as well as provide funds for long term infrastructure. In addition, the Government could issue a long-term infrastructure bond with the following contours:

The Government may introduce a one-time disclosure scheme for declaring undisclosed foreign income and assets and pay tax on such undisclosed income / asset at the rate of 15%. The scheme should also provide for locking 40% of the funds in Elephant Bonds with a coupon rate of 5%. A 5% interest rate, earned from these bonds, would be credited to the depositor at the end of 20 years. The balance funds should be available with the declarant to be utilised in India. The declarant should be required to submit an undertaking that the remaining funds will not be remitted outside India in the future. The scheme should provide all the necessary clarification upfront so as to avoid any ambiguity and confusion. The scheme should also provide immunity from any action under other applicable laws such as FEMA, Securities and Exchange Board of India Act, 1992, Prevention of Money Laundering Act, 2002, etc.). In order to introduce such scheme, necessary amendments would be required to be made under the Black Money Act.

Both foreign as well as domestic capital could be used to invest in these bonds, including holders of undisclosed income. The bonds would be of a long-term period - 20 years or more. The bonds would be backed by a sovereign guarantee. It would only invest in certain kinds of infrastructure as may be specified by the Government, which shall take into account the most

urgent sectoral needs - social, infrastructure and long gestation investments in both public and private sectors. The fund would be managed by NIIF, an already existing professionally managed body anchored by Government of India in collaboration with other institutional investors such as ADIA (Abu Dhabi Investment Authority and Government of Singapore etc.) The bond maybe christened as an NIIF Elephant Bond. The coupon rate would be similar to other government infrastructure bonds. Similar to government bonds it would also have tax rebates up to a specified threshold.

c. Elephant Bonds: Amnesty Scheme?

In the case of All India Federation of Tax Practitioners v. Union of India¹, the constitutional validity of the Voluntary Income Disclosure Scheme (VIDS), 1997 was challenged. It has been widely reported that the Supreme Court in this case observed that future tax amnesty schemes must be avoided (Pani, 2018). The Attorney General of India in this case is also said to have filed an affidavit reflecting the government's commitment to not implement such schemes in the future. The contents of this affidavit hence are relevant in considering the validity of any government scheme that involves or could be construed as tax amnesty.

We have taken both the case and the parts of the affidavit that are part of the Supreme Court judgments into account in our proposal to implement an Elephant Bonds Scheme. However, the full contents of the affidavit are not currently publicly available. We attempted to obtain a copy of the affidavit both on our own and through the concerned government departments. However, both the Department of Legal Affairs (Ministry of Law & Justice) and the CBDT have informed us that they do not possess a copy of the affidavit. We also checked the Supreme Court Registry and were informed that copies of disposed cases are disposed annually. Since the All India Federation of Tax Practitioners case was disposed off on the first day without a full hearing and since it is a 20-year-old case, the Supreme Court Registry also does not possess a copy of the case.

Options going forward:

- **Opinion of a retired Supreme Court judge:** In the absence of the affidavit, we could get the opinion of a retired Supreme Court judge on the constitutional validity of income disclosure schemes. Though the proposed Elephant Bonds Scheme is not strictly an income disclosure scheme like the VDIS, we could also ask for an independent analysis of our scheme in the context of past jurisprudence.
- **Design of the Elephant Bonds Scheme outside the publicly available contents of the affidavit:** The publicly available contents of the affidavit, as recorded in the judgment

¹ 228 ITR 68/ 93 Taxman 737

of the Supreme Court suggests that the Court did not actually go into the merits of the constitutional validity of the VDIS or income disclosure schemes in general. Although there was significant public pressure and an adverse view taken by the Comptroller and Auditor General (CAG), the recorded judgment does not contain a substantive determination on income disclosure schemes *per se*. The Elephant Bonds Scheme proposed in the HLAG Report is designed as an infrastructure funding instrument. The final scheme if implemented, can hence be designed outside the scope of the judgment in the case.

X. EXIM Credit and Insurance Reforms

Most countries have established Exim Banks (or Export Credit Agencies (ECAs)) that play a catalytic role in promoting the country's international trade, addressing transactions at the margin that *standard commercial banks cannot or will not support* due to long tenor / risk perception. Exim Banks are always strongly backed by respective national governments in order to neutralize competition from other countries. As a development financial institution, Exim Bank does not raise funds through retail deposits, and primarily taps the bond markets. Exim Bank's headroom for raising borrowings for financing its business growth is constrained by the Reserve bank of India's (RBI) prescribed ceiling of "10 times the NOF (Net-Owned Funds)".

On many parameters – loans and advances as a share of total exports, loan assets, share capital, leverage ratio - the Exim Bank of India clearly lags behind its peer institutions in other countries. In order to strengthen the Exim Bank of India to cope with the increasing needs of Indian exporters and support India's stagnant exports, and noting the best practices of similar institutions in other countries, the following recommendations are made:

1. The capital base of the Exim Bank needs to be enhanced. The Union Cabinet has, on January 16, 2019, approved a proposal for increasing the authorised capital of Exim Bank from INR 10,000 crore to INR 20,000 crore, and also infusion of equity of INR 4,500 crore in 2018-19 and INR 1,500 crore in 2019-20. In order to achieve an estimated aggregate growth level of 20% p.a., the balance capital (authorised capital less paid-up capital) of INR 6,141 crore needs to be infused by GOI over the subsequent two years ending March 31, 2022. The authorised capital to be simultaneously increased by a minimum of INR 10,000 crore by March 31, 2022.
2. The Bank's borrowing limit is pegged to 10 times its Net Owned Funds. The rationale behind the 10x rule is hard to discern and is not followed by any other Exim Bank across the globe. The limit may be enhanced to 20x with suitable Board level safeguards, if necessary.

3. The prudential limits for Single Borrower and Borrower Group are prescribed by the RBI exactly as for banks, even though the Exim Bank as a niche institution must necessarily have a higher degree of concentration of exposures. The setting of such limits may be left to the Board of Exim Bank, which includes GOI and RBI Directors.
4. It is recommended that GOI should establish support to Exim Bank for facilitating acquisition / creation of assets of strategic importance to the country, particularly for addressing the energy security.

Export credit insurance plays an important role in unleashing the export potential of a country, as it gives an impetus to exports by providing reassurance to lenders and promotes the small and medium enterprises to play a greater role in India's exports. ECGC, which is the export credit insurance agency of the Government of India, requires major boost to perform its role more satisfactorily. It is regulated by the IRDA as an insurance agency like any other insurer. The regulatory framework applicable to ECGC needs modification in view of the unique role it plays in promoting exports. It is a Government agency primarily mandated to promote exports. It not only requires greater capitalization but also needs to be liberated from some of the restrictive provisions which have been discussed at length in the EXIM -credit section of this report.

XI. Merchandise Exports – In need of comprehensive reform

Elsewhere in this report, we have drawn attention to the need for several institutional changes in our policy framework on international trade. Some of these are a change in the mind-set of those who make and administer national policies and a wider set of stakeholders, mainstreaming of international trade in all aspects of sectoral and cross-sectoral policies and their administration, promoting states to play a reformative role in international trade governance and a conscious policy towards integration with global and regional value chains.

It is strongly believed that in view of the emerging global and domestic challenges the approach to foreign trade policy needs to change significantly. India's gains from international trade can come in two ways. Firstly, from its strength in the traditional labour-intensive sectors, where the focus should be on employment creation and raising productivity and product and market diversification; and secondly, from its strength in Information and Communication Technology (ICT) services, focus on Research and Development, Science and Technology and human resource endowment, where the focus should be continuous skill transformation, increased investments in R&D, adoption and promotion of high technology and innovation. Therefore, any impetus to international trade should be framed around these approaches. Further, our policy focus must shift to creating a conducive ecosystem around selected value chains.

In the era of technology driven economic development big data analytics can play an important role in forecasting products and services and markets where India can have export advantage and, therefore, should build competitiveness in those products and services. A sound state of the art statistical system is a pre-requisite to building a far-sighted trade policy.

A National Trade Facilitation Action Plan is in operation but whether implementation is in conformity with the plan is hardly known to the stakeholder community. A concurrent monitoring mechanism for implementation of the trade facilitation action plan has become an imperative. Development of critical and efficient logistics is the key to improving cost competitiveness of our exports. A real time state of the art monitoring mechanism for both creation and operation of major logistics projects should not merely be put in place but should also be available to the highest level for real-time monitoring.

During the last few years strong efforts have been made to develop domestic infrastructure. However, trade infrastructure requires a greater focus. This can happen through two approaches. Much of the infrastructure being created in the country will also support India's capacity for international trade in the long-run-though in some cases it may require last mile augmentation, but in the shorter and medium-term, focused investments need to be made in efficiency and productivity improving trade infrastructure such as, special economic zones, border infrastructure, integrated Customs terminals, cargo handling at air and sea ports, etc. This requires synergies among agencies involved in creating new infrastructure or running existing infrastructure services. A "whole of the Government" approach is of great relevance here. Further private sector should be encouraged to play a role in creation of short-term trade infrastructure on a commercial basis.

Market and product diversification are important strategies of our export endeavour. Market diversification requires intensive market promotion. Unfortunately, the extant extensive framework of Export Promotion Councils suffers from capacity inadequacy, lack of direction, governance deficit and is bereft of strategic thinking and planning. It requires drastic overhaul, including a complete institutional re-structuring inspired by more successful efforts made in other trading nations.

There is also a need for greater investments in market research and market development driven by in-depth understanding of long-term trends. The present format of schemes (Market Access Initiative (MAI) and Market Development Assistance (MDA)) is inadequate. Studies have shown that a large bulk of Indian product exports are income sensitive and growth in global demand in those segments is not as encouraging as in several other product areas. Therefore, as we engage with greater efforts at market development and promotion, our product profile must align with global demand.

Expanding Supply of Skilled Manpower and R&D Expansion

Skilled Manpower: In some technology-intensive sectors, including biotechnology, pharmaceuticals and medical devices, the country needs to expand its talent pool. There is also a need to create stronger industry-academia linkages. Premier institutes should tie up with leading companies to offer relevant internships that provide students exposure to the latest technologies. Institutes can seek the help of industry associations and MoHRD to involve them in upskilling college students. The curriculum in colleges should be updated regularly to keep up with industry requirements.

R&D: It is extremely crucial to stimulate research and development efforts for climbing up the value chain in exports. With this objective, the Government should retain the current 150% tax credit on R&D, and increase it to 200% for long-term projects. In addition, selected outsourced R&D should be eligible for the credit as well. Further, R&D tax benefits should be extended to Limited Liability Partnerships. Product development should also be considered as a form of R&D. For many manufacturing products, exporters need to focus on considerable development and application of technical knowledge to maintain or increase export market share.

XII. Merchandise Exports: Sectoral Analysis and Recommendations

The HLAG analysed just a few sectors in detail for identifying the sector-specific constraints impeding our exports and making recommendations for overcoming them. The sectors examined include: pharmaceuticals, biotechnology, textiles and clothing, electronics, medical devices and agriculture. In addition, the HLAG deliberated in detail on how to use some of the emerging technologies, such as big data analytics, for creating a robust management information system.

i. Merchandise Exports: Pharmaceuticals

The size of the global pharmaceuticals market is estimated to be USD 1.2 trillion. The Indian pharmaceutical sector was valued at USD 33 billion in 2017. India's pharmaceutical industry is expected to expand at a CAGR of 22.4% over 2015–20 to reach USD 55 billion. According to industry estimates, India is likely to become one of the top 3 pharma markets by 2030.

The Indian pharmaceutical industry suffers from excessive regulation (e.g. the current structure involving National Pharmaceutical Pricing Authority (NPPA), DCGI etc has many overlaps, slowing down decision making and industry growth), and frequent changes made thereto, by the Central Drug Standards and Control Organisation (CDSCO) and Food and Drugs

Administration of the state (State FDA) in which the company and/or the manufacturing unit is located.

The system to conceptualize clinical trial protocols is under-developed. Growth of the sector is hampered by overwhelming dependence on China for sourcing Active Pharmaceutical Ingredients (APIs), competition from China in generics and biologics, excessive dependence on US market and generics, and intensifying competition in the American generics drugs market.

In order to further boost the industry, the following recommendations are made:

1. Restructure the regulatory mechanism for the pharmaceutical industry by. creating a central FDA-like institution; The DCGI currently reports to the Joint Secretary, which is not the right level for that position. DCGI's status needs to be elevated to appropriate senior level.
2. The Department of Pharmaceuticals (DoP) must be repurposed to support growth of the industry, and may be appropriately placed under another Ministry. Appropriate budgetary and regulatory measures should be taken to safeguard the promotional mandate of the DoP. The mandate should encompass provision of capital, technological and infrastructural support. Given the size and scale of the pharmaceuticals industry, serious deliberation is required to determine the appropriate Ministry under which the DoP should be constituted. Further, it is important to ensure that pricing, export promotion and public health/welfare concerns are accorded comparable value by the concerned Ministry.
3. India should become a member of Pharmaceutical Inspection Convention and Pharmaceutical Inspection Co-operation Scheme (PIC/S). GMP guidelines within PIC/S simultaneously touch regulators, industry and distributors. Accession to the PIC/S may serve as a well-structured first step in the direction of harmonizing Pharma regulations across different levels of Government. PIC/S membership will also likely (indirectly) increase Indian pharma's market access – by means of Mutual Recognition Agreements (MRAs), for instance.
4. Increase the number of drug inspectors by allowing third party certification through NABCB accredited agencies, and bolster support to inspectors. In this regard, the recommendation of the Mashelkar Committee Report (2003) - having the ratio of one inspector for every 50 manufacturing facilities, and one inspector for every 200 retail facilities- needs to be kept in mind.

ii. Merchandise Exports: Biotechnology

Global biotechnology market is projected to reach USD 726.8 billion by 2025, growing at a CAGR of 8.1% from 2017 to 2025. At present, US is the industry leader followed by South Korea, Germany and United Kingdom. India is among the top 12 markets for biotechnology in the world, with approximately 3% share in the global biotechnology industry. It is the 3rd largest in the Asia-Pacific region. The Indian biotech industry generated a revenue of approximately USD 11.6 billion in FY2017. India records the second highest number of US Food and Drug Administration (USFDA) approved plants (after the USA).

Regulatory environment for biotechnology sector is excessively complicated and needs simplification. The current Indian regulatory system is characterized by divided roles and responsibilities based on the diverse applications of biotechnology. Biotech innovators are accountable to multiple levels of authority and compliance regimes. At the Centre, multiple government bodies simultaneously regulate the biotech industry -- Department of Biotechnology (under the Ministry of Science and Technology), Review Committee on Genetic Manipulation (RCGM), Food Safety and Standards Authority of India (FSSAI), Central Drugs Standard Control Organisation (CDSCO).

At the State level, bodies from three different domains—biotechnology, environmental protection, and drug control—wield varying degrees of regulatory power, depending on the nature of a given biotech research activity or resulting products. Further, absence of a conducive R&D environment is a key constraint in development of innovative drugs. India also faces a shortfall of appropriate talent, largely because the cream of Science and Engineering (S&E) students go abroad to pursue higher education (Master's and PhDs), and eventually find employment in those countries.

To further boost the industry, the following recommendations are made:

1. Restructure the current regulatory mechanism by creating a central FDA-like institution, empowered to oversee the biotechnology industry, as is the case in the US, China, South Korea and Germany. A clearer delineation of authority between Central and State bodies is required. Further, ensure that only Central bodies manage drug approvals and licensing.
2. Appoint an empowered independent commission on biotech that reports directly to a high-level functionary within the Government. Such a commission will enable coordination across the 8 ministries, labs, universities and other bodies that are currently working in silos.
3. Streamline RCGM and Genetic Engineering Appraisal Committee (GEAC) to expedite drug approvals.

iii. **Merchandise Exports: Textiles and Clothing**

Out of the overall global textiles export of about USD 296 billion in 2018, India's textile export was USD 17 billion (for FY17-18). According to the Ministry of Textiles, with the correct policy instruments, India can be in a position to achieve 20% growth in exports each year until 2025. It is anticipated that the total number of jobs in textiles will increase from 45 million in FY2017-18 to 55 million by 2020.

Global apparel trade reached USD 470 billion in 2017, and is expected to grow at a CAGR of ~5% over the next five years (i.e. until 2023). India's clothing exports were estimated to be about USD 17 billion in FY17. While Indian exporters have increased their global share compared to a decade ago, their exports have not performed well for several years now. In 2017-18, India's exports of garments fell 4% in USD terms, while those of Bangladesh and Viet Nam increased by about 8% and 10% respectively.

China is the largest exporter of garments in the world, though its exports have taken a hit recently: down from USD 187 billion in 2014 to USD 158 billion in 2017. This presents a significant opportunity for India to grow – over time, if India captures 20% of Chinese market share in garments, it can expect to see an additional USD 32 billion in exports and approximately a million more jobs. We recognise that this may be a challenging target, which can perhaps be achieved over a time-frame longer than the next 5-6 years. Both Bangladesh and Viet Nam, which were significantly behind us a few years ago, have now surpassed India in garments exports.

In the garments sector, despite being among the four leading developing country exporters in the world, India is the one with the smallest share of large production facilities. Restrictive and poorly implemented labour laws are among the factors that have prevented the expansion of domestic investment into larger scale of operation. Studies done by various international scholars document how the Indian labour market is distorted, and costs the economy in terms of output growth foregone. Labour laws severely limit modernisation efforts and the firm size of operations – i.e. our firms are too small compared to our competitors and we have lost in terms of extra costs induced by lack of economies of scale.

There is a need to make our labour laws considerably more flexible, so that firms can adjust their level of employment and also establish a much larger scale of production which is a key factor to gain a larger share of global demand. This needs to be supplemented by a package of support policies and technological upgradation similar to countries that have outperformed India in world markets, e.g. Bangladesh, China and Viet Nam.

Raw material cost is significant for all parts of the textile supply chain. Exports of all segments in the sector are severely affected by inordinate delays due to bureaucratic processes and

logistics. Consequently, *the turnaround time in India is more than four times compared to China or Turkey.*

The Scheme for Integrated Textiles Parks (SITP) has not been successful in attracting fresh investments. This is on account of small size of parks, absence of fully integrated value chain and absence marketing and market entry support. In addition, the major competing economies provide significant financial incentives, facilitate logistics, clearance and other trade transactions, and in some cases face lower tariffs in key export markets.

In order to achieve the export targets, the following recommendations are made to boost the textile and clothing sector:

1. To enhance scale across the textiles and clothing value chain and promote consolidation of firms, the Government should introduce a limited-period investment allowance across the value chain. In the short-term, this will enable firms to achieve economies of scale and stimulate overall investments.
2. Focus efforts to attract top 10 global textiles and clothing companies (including those from China) to set up large-scale plants in India.
3. In order that high costs do not hinder access to high quality machinery for Indian textiles and apparel companies, implement the Amended Technology Upgradation Fund Scheme (ATUFS). Further, the Export Promotion Capital Goods (EPCG) scheme should be converted into a general scheme for textiles and clothing as a whole, providing duty free access to the machinery.
4. With increasing labour costs in China and newly-imposed tariffs on Chinese imports to the US, India can seek to gain a growing share of the garments manufacturing pie by encouraging Chinese and other companies (linked to large global brands) to manufacture in India.
5. In order to regain our market share lost to Bangladesh and Viet Nam in textiles and garments, concluding the Bilateral Trade and Investment Agreement (BTIA) with the EU is very important.

iv. *Merchandise Exports: Electronics*

Electronics is one of the world's largest and fastest growing industry and is increasingly finding applications in all sectors of the economy. The industry in India is confined to low-end value chain and value addition, which currently is as low as 5 to 10%. Overall global production for this sector is around USD 2.7 trillion (2017). Significant export opportunity also exists in Internet devices and components as 95% of the world population accessing internet uses wireless electronic devices. Only few jurisdictions such as China, Taiwan, Korea RP, Viet Nam etc. cater to this global demand. India has the potential to shift global manufacturing

ecosystems from these countries to India and to cater to this segment by offering incentives which would boost manufacturing in India.

The major challenges associated in the Indian Electronics Sector include lack of adequate infrastructure, supply chain and logistics issues, high cost of finance as compared to other countries, high corporate tax rates, inadequate components/ parts manufacturing base, lack of high-end technology and consequential dependence on imported technology, etc. Further, India's export focussed schemes and incentives such as SEZs and EOUs have been challenged by the United States at the WTO.

In order to overcome these challenges for making India a global hub for high-end manufacturing in the sector, the following recommendations are made:

1. Shift from a tariff-based policy to an incentive-based policy for manufacturing of electronics. Provide incentives based on certain specified criteria such as technology, investment commitment, manufacturing capacity, employment generation, value addition, etc.
2. De-link the export contingency from the incentives/ subsidies being provided to the market players. Guidance from the incentives offered by China, Viet Nam, Taiwan, etc. may be taken.
3. Shift of focus from volume based manufacturing to value based manufacturing is extremely important.
4. Tax Holiday for a considerable period (under Indian tax laws) to incentivize investment by domestic as well as foreign enterprises in high-end electronics;

v. *Merchandise Exports: Medical Devices*

The global medical devices industry is currently valued at approximately USD 103 billion. It is poised for steady growth, with global annual sales projected to reach nearly USD 800 billion by 2030. As per industry estimates, the Indian medical devices market is presently valued at over USD 11 billion, and is expected to grow to USD 50 billion by 2025. The high-tech end of the medical device value chain is currently led by multinationals with extensive service networks; whereas low end equipment and disposables are led by domestic manufacturers because of their cost-effective innovations.

Unfortunately, but not surprisingly, our rules, regulations and policies were set when we were a controlled economy. Policies are changing, but there is a lot of inertia to change. To give just a few examples, a few medical devices are covered under the Drug and Cosmetics Act (D&C Act). This sector has complex and outdated regulatory framework involving Centre and State governments, which takes 24-48 months to accord approvals. This delay, due to the absence of a single window clearance, hinders new product development. Further, medical devices,

unlike pharmaceuticals, are dependent on a mix of technologies such as engineering, electronics, material sciences and information technology. India has not been able to bridge the gap between investments, skilled resources and innovation to fully capitalise on the potential this sector offers. The medical devices industry is complex and requires a robust ecosystem that may take decades to develop.

In order to significantly enhance high-end manufacturing in the sector, the following recommendations are made:

1. Create a single ministry for the regulation of medical devices, right from import and manufacture, up until pricing and sale of the products for easing the compliance burden for both domestic as well as foreign manufacturers.
2. Regulate medical devices by a standalone legislation that is drafted specifically addressing the nuances of the medical device industry. It is harmful to the overall growth of the medical devices (let alone exports) to regulate hypodermic needles, catheters etc. as drugs.
3. Companies are required to adhere to two sets of standards: the Indian standards (as defined by BIS) and ISO/IEC standards. Peg Indian standards to global standards.

vi. Data Driven Approach to Exports

International trade is an important source of livelihood for nations. Hence it is important to anticipate and develop early signals and insight on various changes in the International trade which potentially can affect India's trade. Quantified decision making is a key factor in this understanding. Trade data has been captured by countries mainly through border organisations and have been further analysed to decide strategies and policies. Data is an important resource, which through data science can yield many interesting insights and predictions. Despite the need, and availability of advanced methodology for Big data analytics, India is very slow in building capacity of data-based decision making in trade.

Data to solve problems in trade is the need of the hour and would help to work out a structure or a plan defining the road ahead. In light of this, following recommendations are made:

1. Some of the important aspect of use of data analytics in trade potentially can be a proper forecasting of trade variables, estimating uncertainty of trade environment, tackling issues in Trade in similar products, impact of Trade on employment, under Reporting of Services Trade data & Contribution of SMEs to India's exports etc.
2. Department of Commerce should directly engage a reputed institute, outside the ministry which has expertise both in trade, economics and big data analytics. This institute once engaged should showcase the power of harnessing big data analytics and

how insight so developed can be utilized. Further, the institute should develop long term training of officials of the ministry on Big data analytics for generating awareness on the scope of big data, that will help the initiative to sustain.

3. A structured and policy-oriented use of data is also essential. Relevant Management Information Systems should become the operational tools for clarifying policy objectives, monitoring their progress, and addressing any shortcomings as and when they arise.

XIII. Constituting an Apex Committee for Quick Investment Decisions

Due to various macroeconomic factors such as rising costs of production in China and US-China trade war, many MNCs are looking for new investment destinations and there is strong competition for footloose FDI. To take advantage of this window of opportunity, India needs to have quick decision-making capacity for identifying the big investors it should attract and the wherewithal to provide tailored incentives to start business locally.

We recommend creation of a specialised vehicle empowered to take quick decisions to identify and attract investors based on pre-defined criteria. This is necessary to enable situation-based decision-making suited for dealing with private enterprises. Further, the vacant land in Special Economic Zones can be used to attract foreign investments.

XIV. Outline of Main Report

The report takes a comprehensive and forward-looking approach to trade policy, taking account of key areas for policy focus, the practices in other countries which provide pointers to efficient operations and competitiveness, low-hanging fruits for priority attention, and identifying the major steps in specific sectors which could lead to a significant rise in India's exports. The Report first looks at India's macro economy and international trade (Chapter 1) and also addresses impact of cost of capital, high levels of effective corporate taxes and the exchange rate management on India's exports. Chapter 2 provides the strategic outlook of the global economy and changing dynamics in international trade. Given the implications of WTO and its rules in enhancing India's international trade, chapter 3 of the report makes practical suggestions regarding India's engagement on certain key issues at the multilateral organisation. Chapter 4 examines India's engagement in FTAs and makes recommendations on the future course of action in this regard. In the context of the US-China trade war, in chapter 5 uses simulations undertaken by NCAER and makes specific policy recommendations.

After discussing cross-cutting issues, the subsequent chapters examine some sectoral issues in detail. In services, we note that India has demonstrated a strong export performance, particularly in IT and IT Enabled Services. As export performance in other sectors has not been encouraging, chapter 6 focuses on diversifying India's services exports. Issues related to Education services, Health services and Tourism services are discussed in detail.

Financial services are one of the most buoyant of the services sectors. Further, this sector has strong backward and forward linkages with the manufacturing sector. In order to leverage the full potential of this sector and set it on the path of high growth, chapter 7 analyses the policy-induced problems constraining financial services and addresses issues related to round tripping, KYC, Foreign Individual Investment, Fund Management and long-term bonds. It recommends an innovative, yet practical, model for facilitating foreign institutional investments into India. Chapter 8 explores ideas for strengthening the EXIM Bank and also makes recommendations for export insurance credit.

Chapter 9 examines the overall merchandise trade and makes recommendations for an overall strategy and export subsidies. Chapter 10 provides detailed suggestions in respect of the following sectors: pharmaceuticals, biotech products, textiles and apparels, electronics and medical devices.

Chapter 11 looks at data-driven approach for strengthening the institutional mechanism for export promotion and export policy making. In the light of some investors seeking to move out of China, Chapter 12 examines the best practices prevailing in some countries for attracting foreign investment and makes recommendations for creating an apex committee for investment decisions within the Government. To the extent possible, each chapter follows a uniform structure: outlining India's participation in international trade, best practices followed in some key economies and recommendations for enhancing domestic production and exports.



REPORT OF THE

HIGH LEVEL ADVISORY GROUP

01

India's Economy: Macro and Exports



1. India's Economy: Macro and Exports

The High-Level Advisory Group (HLAG) was constituted by the Minister of Commerce and Industry to assess the global environment and make recommendations to promote trade, investment and other economic activities. Terms of reference of the HLAG is at [Annex I.1](#). The HLAG held twelve meetings during October 2018 and April 2019. Details of the meetings have been provided at [Annex I.2](#). The HLAG benefited from detailed presentations by its members, as well as by the industry and several departments of the Government of India. While the deliberations of HLAG focused on examining challenges and opportunities in different sectors and proposing policy and institutional changes to address them, the Group recognised the primacy of the interplay between international and domestic developments in these domains. The HLAG looked at just a few sectors in detail to derive horizontal and sector-specific recommendations.

The report is concerned with policies which are needed, macro and micro, regulatory and taxation, infrastructure development, bureaucratic interference and ease of doing business to get India to aggressively move towards its potential of export growth (and indirectly GDP growth).

Global Economic challenges such as slowing global economy, rising protectionism and institutional disarray are increasing at a rapid pace. There is an air of uncertainty and unpredictability. The global marketplace has become extremely competitive and is populated by players who have mainstreamed the philosophy of globalization in their institutional psyche. Countries such as China, South Korea, industrial nations in ASEAN and several others, have acquired competitiveness in many product areas by following a *focused* policy approach on international trade.

World Inflation

World inflation has been declining since the mid-1990s. This decline was also observed in India from 1996 to 2004, but divergence occurred during 2005-2014. Today, world inflation has declined to around 2% for advanced economies and between 3 to 4% for most emerging economies. There is little to suggest that this trend will change, and most analysts, including those at international agencies like the IMF and the World Bank, see little prospect for inflation to rise from these levels. Indeed, the conclusion is that aggregate inflation will trend lower [refer to Bhalla (2018) for a detailed review of the structural change in world inflation]. This structural change in the world economy has to be factored in by policy makers in their construction of macro policies.

World Economy and Trade

Before we get to the details of what needs to be done, some details about the world economy, and world trade. One major development, the major development, in world trade has been the collapse of growth in trade volumes, and trade values, post the 2008 Great Financial Crisis (GFC). Despite a large negative growth in world trade (all measured in nominal US dollars and obtained from WTO) of minus 22% in 2009, world trade rebounded strongly in 2010 and 2011 registering trade growth of above 17% in each of these years. And then, growth dropped off a cliff starting in 2012 – only 1.6% per annum over the next six years (with two years of negative growth in 2015 and 2016). Over the previous decade (2003-2012) world trade had grown at an average rate of 10.5% despite the large drop in the post-Crisis year 2009. This reality means that India is facing a very different external environment for world trade than it did just a decade ago.

Thus, one of the big trade facts confronting the world in the last seven years is the very slow growth nature of world trade in US dollars. The global outlook will remain uncertain as sentiment will be shaped by Sino-US economic frictions and protectionism in the developed world. For a nation like India that still benefits significantly from its external engagements, it calls for a clear vision that is effectively implemented as policies. Our future is not to return to the protectionism of the past but to create the competitiveness for the future. Much of the HLAGs deliberations were focused on how to build these competitive capabilities in the near term. With suitable policy changes, India can counter the adverse impact of a slowing global economy and with simple reforms it can buck the trend.

This report on India's trade prospects and policies is not a conventional listing of successes and failures of Indian trade policy over the last 30 years. Rather, it is a constructive plea to our policy-makers of what needs to be done, what is necessary (and possibly sufficient) to accelerate India's export growth, and thereby accelerate GDP growth towards our potential of 8+ per annum over the next 11 years (till 2030). India's GDP is very close to USD 3 trillion. At an average of 7% over the next 11 years, we will be a USD 6.3 trillion economy in 2030; at 8%, a USD 7 trillion company. The relationship is non-linear; if we appreciate that, then trade reforms (both exports and imports) will accelerate our goal of becoming a more important global player.

History of Economic (and Trade) Policy

Importance of Trade: Trade has long been considered, and accurately so, as one of the most preferred indicators of sustained economic growth. That is because trade is a reflector of competitiveness. The world is full of examples of mediocre aggregate

growth for long periods of time – and some, like erstwhile Soviet Union, of high temporary growth via planning.

The reason performance in international trade is singularly revealing is because trade involves enormous checks and balances on all the actors – the politicians, the policy makers, the implementers of policy and the entrepreneurs. Increase in competitiveness means an increase in economic growth which is sustainable.

Outlook: There is the divergence in performance of the overall economy in India (GDP growth among the fastest in the world) and export growth (for the last seven years, post 2011, somewhat on the disappointingly lower side, details below). One important reason for this divergence is that international trade still receives inadequate attention both in the government and outside. This inward focus is visible across most institutions in the public and the private sector. An economy with India's ambition and potential, having already availed benefits of significant globalization, cannot be ambivalent in its approach to globalization.

Less Protection: While on the one hand, we are critical of protectionist measures adopted by others, on the other we have ourselves adopted some protectionist policies. Protectionism is not witnessed in the rise of tariffs alone but is also evident in other measures, e.g., promotion and adoption of technical regulations, frequent imposition of quantitative restrictions, adoption of non-tariff barriers, acute reservation on opening up economy through trade agreements, discriminatory sectoral domestic policies, etc.

Positive discrimination: All products produced in the country cannot receive the same promotional treatment. But some positive discrimination can be helpful. Some kind of differentiation is necessary to focus our attention on those product areas which are clearly identified as winners and potential winners. This is also necessary in the background of the ongoing technology led disruption of the global market place. The desired economic direction and growth can only be achieved when national objectives are in line with the national potential. In a national objective driven industrialization, different Government departments, cannot act in silos. The concept of 'whole of the government' needs to necessarily pervade in all that the government does. This implies that once a national objective is adopted, various departments must align their departmental function in line with the national objective and not work in different directions.

Value Chains: We need to recognize that the road to being a global player, and sustaining high growth of a major economy, is via competitiveness and trade, particularly an increasing share of our exports in global value chains. While the

concentration is on exports, we must recognize that in a world with value chains, it is both exports and imports that build competitiveness or reflect competitiveness.

India has been slow in boarding global value chains - the new paradigm for industrial production in the globalized world. There has been little conscious and coordinated effort to do so at any level in the government or the industry. It is estimated that almost 70% of global production of goods and services now happens through the instrumentality of global and regional value chains. India's imports and exports of components and parts in the machinery sector has increased over the last few years. Much of this indicates greater engagement with the various production networks. Most of these are firm level efforts but very little conscious policy-based effort has gone into it. A comprehensive approach to production with the objective of increasing India's participation in these value chains is required.

1.1 Measurement of India's Trade Performance

Macro Inheritance

It is relevant to situate the discussion on India's performance in international trade in the larger context of India's macro-economy. India's GDP growth has accelerated to around 7 % per annum, a level that was first observed for three consecutive years in the mid-nineties (from 1994 to 1996), a few years after the initiation of major industrial and trade reforms in India. For a brief period, in the early 2000s, starting 2003/4, Indian growth did accelerate to around 8.5 % per annum, but post the 2008 global financial crisis, GDP growth rate has averaged around 7% per annum.

Economic reforms in India, and expectations of more reforms, means that the Indian economy can expect to be at the forefront of growth among the large economies of the world. But our policymakers have to recognize that at 7 % growth the economy has been, and is advancing, at a rate below potential. If this is acknowledged, then we need to examine why our growth has been lower than potential. And this examination will lead us first to examine our performance in international trade. When we do so, our mistakes will be broadly identified, and corrective policies should automatically suggest themselves.

The HLAG committee felt that policy conclusions about trade should be made in the context of our trade performance over the last two decades. Performance in trade can only be examined by looking at performance of India and other countries. Comparative trade data from 2003 onwards were examined for a sample of around 60 non-oil producing economies with a population size greater than 10 million. The population filter was needed so that the comparison is done for broadly similar kinds of

economies. The oil-economy filter was applied in order to evaluate economies facing similar external conditions.

Two time-periods were chosen. The first, 2003-2011, represents the high trade growth period, a period when world export growth averaged a CAGR of 11.5 %. The second 2012-2017 is a period when world export growth was stagnant – an average growth very close to zero – nominal growth in trade in US dollars of only 0.3 % per annum (see Table). Even though world trade (and India's exports) have rebounded to a level of around 10 % in nominal US dollars in the last two years (2017 and 2018) there is strong expectation that world trade will converge to a lower rate in the next decade. That is what Indian policy has to assume i.e. world trade at around a 5 % expansion in nominal US dollars or a 0-3 % expansion in volume. This expectation underlies the urgency for trade reforms in India.

The table reports world (consisting of these 60 economies) and our absolute and relative performance for seven indicators. Relative performance is measured via rank with rank equal to 1 being the best performer. Ranks are a powerful summary statistic. It is a statistic that explicitly incorporates changing patterns of world performance. For example, if world trade growth has collapsed (as it has), then maintaining the rank obtained in the previous high growth environment (i.e. from 2003-2011) means that even though absolute growth has declined, performance has not. Hence, ranks and changes in rank are reliable summary measures of performance and changes in performance.

The rank analysis yields some surprising conclusions. For both GDP growth (and the real exchange rate) our performance does not change. We were among the top 5-8 economies in both the time-periods. Note that these are both large and small economies. Among large economies our rank has improved (we have displaced China from its number 1 ranking).

Table 1.1 World and India's Export Performance - 2003-2017

Indicator	2003-17 (% per year)			2003-11 (% per year)			2012-17 (% per year)		
	World	India	Rank	World	India	Rank	World	India	Rank
GDP growth	5.8	7.4	6	6.3	7.8	5	4.9	6.6	8
Real Exchange Rate	97.4	6		97.1	6		97.8	5	
Agriculture	7.3	11.6	12	11.6	17.9	11	0.9	2.23	30
Manufacturing	6.3	11.4	14	9.8	17.7	16	0.9	2	25
Goods	6.9	11.9	12	11.8	19.9	10	-0.5	-0.2	38
Services	7.3	15	4	10.1	21.8	6	3.2	4.8	23
All Trade	7	12.9	10	11.5	20.5	10	0.3	1.5	33

Source: WTO, BIS

Notes: Analysis based on a sample of around 60 non-oil exporting countries, all with population greater than 10 million.

However, no matter what the sector – Agriculture, Manufacturing goods, Goods (Merchandise), Services and All trade – India's ranking is lower now (between 2012 and 2017) than before.

Agriculture: a deterioration in rank from 11 to 30.

Manufacturing: a lowering of rank from 16 to 25.

Merchandise goods: the sharpest deterioration, from 10th in 2003-11 to 38 in 2012-2017.

Services: Even the rank in services exports growth performance has declined – from 6th in 2003-11 to 23rd in 2012-17. In terms of all goods and services exports, Indian exports grew at 21 % in 2003-11; between 2012-17, the growth has fallen to just 1.5 % per annum. Note that for both time-periods, Indian share in world trade is increasing (albeit slowly) because our growth is faster than the world average.

Thus, India has to deal with an additional truth. Most importantly, the fact that our relative trade performance has worsened precisely at the time that absolute levels of world trade growth have collapsed. We need to examine why.

1.2 Macro Determinants of India's Export Performance

What are the prime causes for India's relative performance? In our deliberations with government officials, industry, and academics, the following causes were mentioned, and in order of importance. An old, unsuited and un-reformed mind-set; extreme regulatory controls; labour laws in need of urgent reform and high effective corporate tax rates.

None of the above four determinants have really changed in the last twenty years, yet our performance has appreciably worsened. How has this happened? Most likely, because the world has become a lot more competitive and inherited comparative advantage is no longer in the nature of low-hanging fruit. Countries around the world have recognized this reality and have engaged in lowering taxes and regulatory controls. India has been slow to adapt. This needs to be recognized; and recognition of the underlying causes will help us to improve.

We will now examine each of the constraints to our export performance in some detail.

1.2.1 Mind-Set

In our deliberations with officials, the mind-set received prominent attention. Many claimed that an underlying cause of slow change was because the policy-makers had not adapted fast enough to a changing world environment. As documented above, growth (export and GDP) has undergone radical change – in particular, a slowdown of historical proportions in world trade. All countries have had to emerge from the unduly comfortable zone experienced during 2003-11. We need to examine whether our risk-averse mind-set (some would say a mind-set bordering on paranoia) has led to our worsening trade performance.

What do we mean by the mind-set? It is the centuries old desire to control the flow of events. And in India the mind-set has been particularly obstinate and risk-averse. A not untrue description of the attitude would be that road building is avoided because of the fear of an accident.

India for a long time had cocooned itself in protectionist import substitution policies and opened its economy much later in the early 1990's. Our gains from liberalization of economic policies and free trade have been significant but there is a manifold potential for further growth. One of the major stumbling blocks in achieving this potential is a mind-set, which still comforts itself in the pre-90's protectionist paradigm.

This mind set is visible not just in the governments at the centre and state but is widely noticed in different segments of national economy. There is no doubt that slow growth in logistics and infrastructure besides absence of trade facilitation reforms have helped in motivating and sustaining this old mind-set. There is also a burden of legacy. The Indian economy almost in all sectors is multi-layered, where traditional and the modern coexist. The mind-set needs to change.

Nations which have participated in international trade significantly have built robust national economies. In the year 2000 India's international trade constituted approximately 19% of the GDP. This rose to 55% in 2011 and thereafter came down to around 45% at present. It is quite apparent that India has significantly benefitted from its globalization efforts and today international trade contributes almost a quarter of the GDP. Note also the close correlation between expansion (contraction) of trade and acceleration (deceleration) in GDP growth.

1.2.2 Exchange Rate Over-valuation?

It is often (most often) contended by experts that yes, Indian exports have performed badly but it is due to our exchange rate policy. As discussed earlier, this is at best a bad (and untrue) excuse. India's real exchange rate index (BIS) between 2003-12 was 97.1; between 2012-17 it has averaged 97.8. Countries that have really performed well (Bangladesh and Viet Nam) have seen a large increase (over 30 %) in their real exchange rate. As has China (28 % appreciation), as has Philippines (21 %) and Thailand (10 % appreciation).

While one view could be that devaluation of the currency could enhance exports, our analysis shows that this may not be a viable option, or an effective option [refer to Bhalla (2012) for a detailed discussion of why devaluation may no longer be a viable option]. No large country (apart from China) has been successful in enhancing exports by depressing its currency and this was only possible till around 2010. The latest US-China tariff war is indeed a reflection of the reality that unilateral devaluation is no longer possible. Indeed, our analysis shows that India's real exchange rate depreciated by only 4% whereas the nominal exchange rate depreciated by close to 10%. And several of our competitor countries also had a lowering of the real exchange rate by around 5%. Hence, zero advantage from nominal currency depreciation.

Long-term data (see Table 1.1) shows that the real exchange rate in India has stayed constant over the last two decades – no evidence that lack of depreciation has been a factor in explaining slow export growth between 2003-2012. On a real exchange rate basis, the Indian rupee is one of the most competitive currencies in our sample of 60 countries – with a rank of 5 or 6 with 1 being the most competitive.

1.2.3 High Cost of Capital

Indian industry (and to a lesser extent services) loses out in the competitive race because Indian producers face a very high cost of capital. Over the last five years, the real repo rate has averaged over 2 % per annum – or an increase in real rates of over 3 percentage points over the high export growth period. The real policy rate today (and the last several years) is the highest ever observed in India, and close to the highest in our sample of 60 countries. This is not the case with our competitors because the median real rate in the world has stayed broadly constant at around 0.8 % per annum for emerging economies, and somewhat lower for advanced economies.

1.2.4 High levels of effective corporate tax rates

Apart from paying nearly the highest cost of capital, Indian corporates among the highest effective corporate tax rate in the world. Effective tax rate is defined as the tax actually paid to the income (profit) earned by a corporate. In 2017-18, the effective corporate tax rate in India was around 24 %.

India's high tax corporate income tax rates are backed up by various studies. Chen and Mintz (2015) in "The 2014 Global Tax Competitiveness Report" aggregate corporate income taxes of 95 countries for every year since 2005 to 2014. From the data presented, we see that India ranks 9th highest among the 95 countries with a corporate income tax rate of 34 percent in 2014. In 2006 however, India's position was 22nd in spite of the corporate income tax rate being very similar to 2014 at 33.7%.

Markle and Shackleford (2011) in their paper "Cross-Country comparisons of corporate income taxes" use publicly available financial statement information for 11,602 public corporations from 82 countries from 1988–2009 in an attempt to isolate the impact of domicile on corporate taxes. From the data they present, we see that India ranks highly in median effective tax rates across industries with Finance industry being the most severely taxed. For the years 1988-2009, India was the highest taxed economy for capital investments – at 36 % versus 19 % for Malaysia, 25 % for Taiwan and 32 % for USA.

Centre of Business Taxation of Oxford University also aggregates corporate income tax rates across 48 countries every year and also allows for deductibility of depreciation expenses. Using their Effective Average Tax Rates (EATR) & Effective Marginal Tax Rates (EMTR) metrics, the data for 2016 shows India highest in EATR measure with 30.7 percent and only United States, France and Argentina above it. Similarly, India ranks 7th highest among the 48 countries for EMTR with 22.7 percent for 2016.

One of the most labour-intensive industry is textiles and clothing, and India has been a long-term player in this field. However, both Bangladesh and Viet Nam, significantly behind us a few years ago, are rapidly catching up. In 2010, India exported USD 29.4 billion worth of textiles, with Bangladesh USD 18.4 billion, and Viet Nam USD 14.1 billion. In 2017, Indian textile exports were at USD 30.2 billion, Bangladesh at USD 36.1 billion and Viet Nam, USD 33.2 billion.

The World Bank's Ease of Doing Business has a relatively ignored section on corporate taxation. It provides the percent of profit obtained by a firm after payment of three components: Profit tax, labour tax and contributions (wage payments) and other taxes (indirect e.g. GST). Among twenty large emerging economies, India was ranked as the

fourth highest payer of corporate taxes. Retained profits (after payment of wages and taxes) were 44 % of income, compared to a retention rate of 62 % for Viet Nam and 66 % for Bangladesh.

1.2.5 Labour Laws and Firm Size

A very likely determinant of slow export growth is our labour laws which hinder expansion in firm size. Studies done by various international scholars document how the Indian labor market is distorted, and costs the economy in terms of output growth foregone. Labour laws severely limit the firm size of operations – i.e. our firms are too small compared to our competitors and we have lost in terms of extra costs induced by *lack of economies of scale*. In addition, an ICRIER (Hoda and Rai, 2015) study concludes as follows:

"In labour-intensive industries like clothing (readymade garments) and leather products (footwear and accessories), the rigidity introduced by the requirement for government permission for retrenchment in industrial units employing more than 100 workers also inhibits the establishment of units with a large workforce, which can benefit from economies of scale." In addition, the Industrial Disputes Act of 1947 (old and still in operation) "does create a psychological block in entrepreneurs against establishing new enterprises with a large workforce and impede attainment of economies of scale."

One area where policy intervention could be effective pertains to making labour laws more flexible. This would enable firms, particularly in the apparel sector to scale up. What else can policy intervention seek to achieve to make the firms more efficient? As the report discusses, the government can intervene through suitable changes in taxation structure, streamlining regulatory mechanisms and providing incentives in a WTO compatible manner.

1.2.6 Protectionism and Customs Tariffs

After consistently following the strategy of gradually reducing Customs Tariffs for over two decades under different governments, and with tariffs remaining largely low and stable, India's average MFN tariffs increased in 2017. This was followed by a further tariff increase, both as announced in the 2018 Union Budget and later again in 2018. This trend needs to be arrested and reversed, with a return to a strategy of generally lower and simplified tariffs to improve the ability of Indian exporters to link up with rapidly evolving global value chains.

India's tariff structure should be rationalised, simplified, and made more predictable. Both the upper range of tariffs and the number of tariff rates should be reduced over a five-year period. The average MFN tariff for non-agricultural goods should be phased down and reduced to a single digit, closer to the current trade-weighted tariff average. The so-called nuisance tariffs (up to 2 or 3 per cent), which serve little purpose, should be reduced to zero over a three-year period. In certain very limited number of cases, particularly new technology products, basic customs duties may need to be temporarily increased to provide domestic industry with a pre-announced specified time to become competitive, and the tariff rates decreasing each year towards a lower rate before the increase. This should be done after transparent consultation and consideration of the impact of the tariff increase.

1.2.7 Agricultural Exports

About Agriculture, the less said, the better. It is the only sector in the economy that has not been touched by any meaningful reform since independence. Policy towards agriculture is still mired in myriad of internal restrictions. Policy makers are trigger happy in imposing bans, and removing them – at will. As shown in the table, India is today ranked 30th in agricultural exports; there is excess food production, and low prices for farmers. And unique among all the nations in the world we enforce the APMC (Agricultural Produce Marketing Commission) Act – this Act *requires* a farmer to only sell his produce through a regulated and licensed market – where middlemen and officials profit, and the country loses. It was not so long ago (in 2016 in fact) when prices of an essential food commodity – pulses – reached record prices. It is instructive to look at the gap between the wholesale and consumer price of pulses in that year – the consumer price was three times higher than the wholesale price received by the farmer. There is always a positive gap between wholesale and retail prices. In 1200, Chinese silk in Italy sold at three times the price of Chinese silk in Beijing i.e. the same ratio as obtained for pulses in India in markets that are next door!

1.3 Policy Implications: Exchange rate depreciation vs. corporate tax cuts

There is a major policy choice implication that emerges from the above discussion of the influence of tax changes and exchange rate changes on export growth. It will be very difficult, if not near impossible, to engineer a real devaluation of the rupee of more than 10 %. The estimated elasticity is around 0.5 i.e. for each 10 % depreciation, the real exchange rate depreciates by 5 %. In 2018, the Indian rupee depreciated by an average of 8 %, but the real exchange rate depreciated by only 4 % i.e. exactly the average observed for the 1993-2018 period!

With an exchange rate depreciation, input and wage costs also increase, and are likely to reduce the elasticity of profits (and therefore the incentive for export expansion) even further, perhaps to around 0.3.

With a change in the corporate tax rate the pass through is 1 for 1. A 5 percentage point (ppt) reduction in the corporate tax rate to 28 % from the 33 % prevailing at present (tax plus surcharges etc.) will increase profits from 67 to 72 or a 7.5 % gain. A move from 33 to 25 % will increase profits from 67 to 75 or a 12 % gain in profits.

It is simple calculations like this which show that very few countries (if any) advocate exchange rate depreciation to help exports; rather the policy choice is always a cut in the tax rate, *ceteris paribus*.

1.4 Export growth and targets

India's share in global merchandise exports was 1.7% in 2017, and the services share 3.4% (WTO data). Aggregate export share in world exports has been on a marginal upward trend and has plateaued in the 2 to 2.1% range since registering a local peak of 1.8% in 2010.

With this aggregate backdrop, the government has set a target of doubling of India's exports by 2025. How realistic is this target? One method is to evaluate prospects in terms of historical, aggregate elasticities. For the longish period 1996-2017, the aggregate elasticity of Indian export growth with regard to world export growth is 1.18. This places India among the top 5 countries among comparable economies. China's export growth elasticity has been a bit higher at 1.25. In goods, India's elasticity has been 1.13 vs. China's 1.33; in services, Indian elasticity is the highest at 1.6 versus China at 1.27.

It is reasonable to assume that we can increase the long-term average elasticity to approximately equal that of China i.e. 1.25. However, in order to achieve this goal, exporters and the government would need to work closely in tandem. While the exporters and producers have to take action to enhance cost competitiveness, the government can assist by streamlining regulatory requirements and making other policy changes (e.g. reforming labour laws, and reducing corporate tax rates).

We should be aware that elasticity is the multiple over world trade growth. While this multiple can be increased by appropriate policies, India cannot affect the magnitude of world export growth (in nominal US dollars). This growth is unlikely to average more than 8% over the next decade. But with an enhanced multiple of 1.25, the export growth target of 10% a year for India, or a doubling about every seven years, is realistic.

02

Strategic Outlook



2. Strategic Outlook

While the deliberations of HLAG focused on examining challenges and opportunities in different sectors and proposing policy and institutional changes to address them, the Group recognizes the primacy of the interplay between international and domestic developments in these domains. The geographies considered were mainly regional, but the HLAG's discussions examined the approach of key economies and the relevance of multilateral regimes. The big picture that frames the Group's working recognizes macro headwinds in the near and possibly medium-term. The key principles that encouraged globalization in the last three decades – more liberal access to markets, creation of global supply chains and reliance on talent mobility – are all under stress now. Political, cultural and economic nationalism have gathered momentum across regions, reflected amongst others in electoral outcomes. Protectionism has risen overall, and sharper national contradictions are impacting established trade patterns. This will lead to a different set of concerns and opportunities.

The most dramatic shift with respect to trade and other economic activities is in the posture of the United States (US). A nation that has historically espoused rule-based regimes and advocated greater economic inter-dependence is departing from its traditional positions. Bilateral trade deficits have become the most important yardstick to judge relationships. A determined effort is also underway to bring back manufacturing to the US through the aggressive usage of financial and political instruments. A more protectionist America is also displaying a social outlook that is its political corollary. This mindset is aggravating suspicions of multilateral institutions, thereby strengthening a preference for bilateral or plurilateral arrangements. Within its overall framework for global engagement, the salience of trade issues has gone up sharply. Whether ally or competitor, or somewhere in between, all countries have to face this new reality. The US is also seeking to rearrange global trade patterns and revise global supply chains to reflect its geopolitical concerns. Where India is concerned, it is imperative that this contemporary understanding is reflected in our policy actions. That has been examined closely and HLAG believes that some of the resulting opportunities can be exploited by India.

How to leverage the demands of a strong American economy with its continuing need for talent is the task ahead. Engaging more intensively and bilaterally on trade matters is part of this endeavor. That should not, however, dilute the pursuit of our objectives through multilateral avenues. We should also be conscious that with the US, progress in other sectors is unlikely to now produce much relief on the trade front. Market access has acquired heightened sensitivity, with a stronger message of reciprocity. This will be more complicated as a larger Indian economy with higher capabilities and greater demands will seek a different equilibrium with the world. It is important to be

hard-headed in dealing with an increasingly transactional polity. The focus should be on outcomes rather than positions. While standing firm on core concerns, finding common ground with the US should be a priority. The Indo-US partnership is still the one with the greatest economic potential and the sharpest strategic significance. This realization is reflected in the report's approach.

The second major variable is the economic behavior of China. India has seen its trade deficit with that country rise to unacceptable levels. This is not an outcome that reflects competitive advantages. Restricted market access in sectors where India is globally competitive – such as IT services and pharmaceuticals – contribute to this skewed picture. China is today globally under pressure to correct its trade posture. This happens as the larger India-China bilateral relationship has also moved to an improved level of stability. When it comes to trade, India needs to see better numbers, not just nicer words. This report strongly recommends that ensuring fairer access to the Chinese market be made a key element in the relationship. Otherwise, the lack of economic and societal support for this relationship will continue to limit its prospects. The interest of Chinese companies in executing infrastructure projects in India is another important element in the calculation. While Chinese investments and project capabilities have contributed to our growth and efficiency, they cannot be divorced from the larger economic balance. Commerce with China cannot be left to business alone and must be approached as a strategic priority. The impact of China on our industrial well-being is direct and visible. An urgent redressal of the current situation is a necessary aspect of strengthening comprehensive national power.

The European Union (EU) is and will remain a key economic partner for India. The consequences of Brexit are difficult to judge as yet because the direction of events is still not clear. But in whatever scenario, both the EU and the United Kingdom will remain major factors in trade, investment, technology and best practices. They represent markets where realization of higher value should be our primary goal. The negotiation of a free trade agreement with EU is again relevant to this strategy. The ASEAN has been very much at the center of India's economic reform process and can collaborate closely as India moves towards becoming a USD 5 trillion economy. The supply and consumption that would reflect this transition is of great interest to this region and can become the basis for a new level of understanding. Further East, both Japan and South Korea stand out as natural partners in India's economic growth and development process. Their ability to shape the technology and skill strengths of our society needs to be fully recognized. Another region of vital importance is the Gulf, which accounts for a high proportion of energy, trade, projects, diaspora and increasingly, of investments. The transformation in India's ties in the last few years with the Gulf has been remarkable and merits stronger commercial follow-up. With Africa and Latin America, Indian businesses require greater encouragement and

practical support to seriously explore their considerable potential. The HLAG examined measures that could strengthen competitiveness and mitigate risks in that regard. Translating lines of credit into real projects needs sustained attention at both policy and implementation levels.

All major economies are first tested in their immediate neighborhood. There is considerable ground for India to improve in that regard. Recent initiatives to take hard and soft connectivity in South Asia to a higher level will yield results even in the near term. They provide the basis for expanding business in the region and creating the interdependency that strengthens stability and security. India has already moved to a strategic and non-reciprocal approach towards friendly neighbors, articulated as a **Neighborhood First** policy. Continued investment, especially in trans-border infrastructure, will yield handsome returns. The sense of an extended neighborhood – from the Gulf to South East Asia – has expanded the core circle of commercial priority. A commitment to explore opportunities more effectively in this zone will have significant long-term repercussions.

Free Trade Agreements (FTAs) are a notable feature of contemporary commerce. The direction of global politics is likely to accentuate this further. This combination of economic efficiencies and geopolitical interests is likely to ensure that the bulk of global trade flows will be channeled through FTAs. Given its growing external interests, India cannot remain isolated from these trends. At the same time, past experience suggests that the absence of adequate safeguards has had a very damaging impact on many domestic sectors. The challenge, therefore, is to reconcile the strategic imperatives of FTA membership with the interests of domestic industry that are often disadvantaged by its onerous circumstances. Reflecting a right balance in our negotiating posture is critical. So too is the requirement to develop standards and specifications that will prevent the misuse of FTAs. The immediate challenge is the Regional Comprehensive Economic Partnership (RCEP), but other negotiations await in the near future. Constant review of FTAs in operation is also required to introduce correctives. Lock-in of favorable situations by the other party should be strongly discouraged.

The global outlook will remain uncertain as sentiment will be shaped by Sino-US economic frictions and protectionism in the developed world. For a nation like India that still benefits significantly from its external engagements, it calls for a clear vision that is effectively implemented as policies. Our future is not to return to the protectionism of the past but to create the competitiveness for the future. Much of the HLAG's deliberations were focused on how to build these competitive capabilities in the near term. While the international situation may be more volatile, the prospect of leveraging it remains open. Putting together the right combination of domestic

measures and external initiatives can seriously enhance our economic profile. HLAG has examined a wide range of regulations and practices to arrive at practical suggestions for policy consideration. It is confident that these can help our nation chart a more confident and productive path ahead.

03

WTO

and

India



3. WTO and India

3.1 Overall Strategy

When determining India's strategy with respect to its participation in WTO, the approach should go beyond the current issues that are a focus of attention at the WTO, while giving priority to the key areas of current discussion/negotiation. A wider systemic approach is required for India to use the WTO for improving its trade prospects and competitiveness.

The WTO should be considered both as a system of disciplines which help build a framework for good governance (transparency, timeliness, due process, notification and explanation), as well as in terms of specific areas that are covered by WTO Agreements, e.g. trade in goods and services, intellectual property, regulatory issues, and dispute settlement. Nevertheless, a multilateral system needs a longer gestation for rule making and because of its intrinsic structural constraints there is a time lag between the existing rules and the rules required to regulate the fast- developing business practices.

India should use WTO as part of its overall strategic vision on growth and interaction with the international economy. In this context, while some parts of WTO are not functioning well (e.g. dispute settlement and negotiations), others are operational and should be used for improving trade prospects and conditions for the country.

WTO can be used to seek clarification from other WTO Members on their policies, raise concerns about policies that require solution, address trade policy related disputes, improve the capacity of domestic policy makers and business/civil society, and a coherent forward-looking strategy for participation in the WTO on existing areas and new or emerging areas.

An important step is to raise in WTO Committees, specific trade concerns on trade policies of other countries, to remove existing trade restraints faced by India's exports. In this context it is noteworthy that while India has raised relatively significant number of specific trade concerns in the area of sanitary and phytosanitary measures, relatively much fewer number of such concerns have been raised with respect to technical barriers to trade faced by Indian exports.

3.2 Domestic and International Coordination

The above requires domestic and international co-ordination, prioritisation among issues, and monitoring and evaluation using effective management information

systems (MIS), improving the capacity and impact of the Trade Policy Division in the Department of Commerce to:

- i. Catalogue India's trade policy concerns raised by our exporters, and pursuing them in WTO as well as bilaterally
- ii. Keep track of our own policies and processes for consistency and coherence (including coherence between India's statements abroad and actions domestically), and
- iii. Keep track of policies and process of other countries to identify India's concerns.
- iv. Effectiveness of these tasks would require co-ordination with:
 - Different Ministries and Departments of the Government of India (i.e. the entire government should own the trade policy agenda because it requires efforts from all parts of the Government),
 - The Indian Permanent Mission to WTO in Geneva,
 - Missions of other countries,
 - A large group of coalition-partners from other countries,
 - Domestic Stakeholders (Business, Civil Society),
 - Stakeholders in other countries and International or Regional Organisations other than WTO

There should be a balance between issue specific approach and coalition building. India should engage in discussions / negotiations on issue specific basis.

To manage the overall policy initiative, it is important to constitute an inter-ministerial group at the ministerial level to mainstream international trade related issues particularly to disseminate and evolve national official thinking on issues to be addressed at the WTO, as well as the global trade agenda that India needs to follow.

Likewise, to carry out an advocacy program on wider level in the states through the Council for Trade and Development and other mechanisms to get all stakeholders on board.

3.3 Participation in WTO Discussions

The discussion in WTO is likely to focus on India's trade and regulatory policy, existing areas of WTO that are not functioning (e.g. Dispute Settlement), certain existing areas for which WTO members have strongly divergent views, new areas of trade policy being considered for negotiation in WTO, new trade-related areas that are covered in new or emerging FTAs.

India is significantly active in WTO, and this participation needs to be within a framework of broad principles which should reflect as follows.

Regarding whether or not to participate in any WTO activity, especially plurilaterals, it is important to bear in mind that lack of participation means India would not be able to influence the results directly. Participation does not mean that we have to agree to the conditions that we find difficult to accept. Participation can mean that India can seek its objectives in any other area through the discussions in a specific context.

However, if a group is filled predominantly with countries subscribing to a line directly opposed to India's interests and if India's participation brings about a rift among India's traditional supporters at the WTO, the decision needs to be handled extra carefully.

The answer is relatively clearer if the issue involves Market Access. India need not participate if there is difficulty in opening up markets, and flexibilities are likely to be limited. It should participate if it is possible to develop flexibilities and operational space. In contrast, if the subject matter pertains to Rules (not Market Access), then greater basis for considering participation in the negotiation. The outcome could range from "soft" to "hard" law, including combinations of the two.

Furthermore, lack of participation in any area does not mean that we should not consider the manner in which international regulatory conditions are evolving due to FTAs. We need to domestically prepare for the ongoing changes in the international trade regimes occurring through FTAs, irrespective of whether we are directly participating in the negotiations. In this background, participation should be considered seriously unless strong reasons exist that make participation difficult.

3.4 Priority in Negotiations

In the various discussions/negotiations, the stance of India could be that:

3.4.1 Development Related Provisions, particularly Special and Differential Treatment

India is against the view of curtailing or limiting existing approach to flexibilities; Even now, flexibilities available to India are less than to several other developing countries. India should continue with that position – while clarifying the ideas that would clarify "landing zones" in the discussion. It needs to develop a strong response with like-minded countries to the US proposal dated 16 Jan 2019 seeking differentiation among developing countries.

3.4.2 Plurilateral Negotiations (current or future)

Taking a general stand against plurilaterals would not be appropriate. The answer on whether or not to favour plurilaterals should depend on the issue and potential impact, i.e. positive or negative impact of non-participation.

The multilateral system is in the best interest of a developing country such as India, however the decision-making process cannot move because of the constraints of a consensus-based system. In this situation, a plurilateral system holds promise. India would need to consider each initiative on a case by case basis, taking account of the relevant objectives, and the conditions and flexibilities that will allow the process to move forward.

3.4.3 E-Commerce

There are two options. One option is that India should participate, but more for information gathering and raising concerns, with clear perception that there are a number of areas where India is not in a position to agree especially because the evolution of e-commerce and related technologies is not clear. The second option is to not participate, but prepare for changes that are going to arise in the regulatory operational context due to FTAs and plurilaterals.

3.4.4 Investment Facilitation

India does not participate on grounds that this is beyond the mandate. Also, the fear that despite the EU assurance, it will end up negotiating market access and Investor State Dispute Settlement (ISDS). India should examine the possibility of participation if this can lead to an agreement which affirms what is domestically being done and such participation also helps India seek additional objectives in other areas of interest at the WTO.

3.4.5 Trilateral Initiative to Address China's Economic Policies

India should actively participate and engage in the discussion/negotiation on subsidies, and on State-Owned Enterprises. Regarding Intellectual Property Rights, India need not actively participate in this area but should keep a close eye on developments.

3.5 Conclusions

In terms of the system of WTO, India needs to take a strong position to affirm the foundational principles and retention of the systemic framework of WTO. This implies that:

- i. The Appellate Body (AB) should not be done away with. Acceptance of AB ruling should not be optional but continue to be mandatory.
- ii. Most Favoured Nation (MFN) treatment should not be done away with
- iii. Special and Differential Treatment should be retained (this is both an operational and political concept). Differentiation should be strongly opposed.
- iv. Some results in pending Doha issues must be sought, e.g. limits on product specific subsidies for agriculture products
- v. Approaches that make the system fair should be emphasised.

Keeping these aspects in mind, India needs to stay informed and develop its positions that keep the foundational principles in the context of other upcoming areas such as:

- i. Possible deviation from MFN to make plurilaterals easier.
- ii. Improving Transparency and Notification.
- iii. Improving the system for effectively addressing trade restraints identified.
- iv. Downsizing ineffective Committees.
- v. Scope of National Security.

04

India's Regional Trade Agreements (RTAs): Rationale, Experience, Problems, Hurdles and Solutions



4. India's Regional Trade Agreements (RTAs): Rationale, Experience, Problems, Hurdles and Solutions

4.1 Economic, Institutional and Geopolitical Rationale

We need to seriously examine our approach to alternatives to the existing consensus-based decision making; at a more granular level we need to review our approach to the Regional Trade Agreements (RTAs). The focus on creating a conducive ecosystem for facilitating our participation in value chains requires us to review our somewhat frozen approach to regional /Free Trade Agreements. In the new approach to RTAs, value chains determine the selection of trading partners and concessions in tariffs, creation of rules and establishment of institutional mechanisms. We need to pay greater attention to regional rule-making in the areas of Competition and Public Enterprises. The trade agreements should be deeper in content and focus should be on functional and specific sectoral interests. The interface of services and manufacturing (Embedded Services) is increasingly becoming more important and needs to be studied carefully and our interests advanced adequately.

4.1.1 Economic Rationale

- i. Understanding Economics of FTAs: Trade Creation, Employment Generation and Development

The economics of FTAs/Comprehensive Economic Cooperation Agreement (CECAs)/RTAs needs to be understood clearly and reciprocal benefits emanating from FTAs must be assessed in an objective manner. Considering that imports are only bad is a very narrow and myopic view in the context of FTAs. Imports do provide price-competitive and high-quality inputs to domestic manufacturing and become a source of competitiveness for exports. It is also considered that FTAs are trade diverting hence they result in costly trade from inefficient sources. However, it can be argued that with tariff liberalization commitments under FTA, the additional market access propels a process of scale expansion in the domestic manufacturing, help reaping economies of scale and thus enhanced price-competitiveness which translates trade diversion ultimately into trade creation. With this, there is also greater employment generation. Due to inter-sectoral linkages, a further process of greater economic activity in other sectors is unleashed because of backward and forward linkages of the firms that take advantage of an FTA, thus creating a virtuous economic cycle whereby employment generation and demand creation in other linked sectors yield an overall developmental outcome.

ii. FTAs vs Unilateral Trade Liberalisation

An economy can liberalise its trade policy in three ways - unilaterally, whereby it provides access to its market to a foreign country unilaterally without any reciprocal gains- the advantage here is the freedom to choose the pace of reforms; multilaterally, wherein all countries party to multilateral liberalisation are given the same preferential treatment. A unilateral liberalization can be skewed as it can be driven by vested interests and can also go on a pace not good enough to deal with fast moving global developments. Further there are no gains in correlation with the domestic liberalization from the beneficiary countries. Thirdly, a bilateral or regional setting based on complementarities offers a healthy fit provided the trade partners are selected with rigor and fore sight keeping mutual benefits at the core of consideration. Further, this setting can also constructively build on the multilateral base for greater gains in the long run.

iii. Global & Regional Industrial Restructuring: RTAs in the Context of Value Chains

Today over 70 to 80 percent of global trade is in intermediate goods, capital goods and services, highlighting the importance of Global Value Chains (GVCs) and Regional Value Chains (RVCs). India has not been able to hook on to regional and global value chains in a significant manner and should be looking for opportunities of locating itself on these value chains. Global value chains are the current paradigm of manufacturing and an aspirant economy cannot let an opportunity go as these arrangements normally are for long periods with lead companies preferring not to change partners over longer period. RTAs need to be situated in the wider context of gearing to tap the opportunities that open up in RVCs and GVCs Participation in these value chains brings investments and technology besides the other benefits of domestic manufacturing and services. With Industrial Revolution 4.0 on the horizon, a futuristic view of RTAs needs to be taken as RTAs provide a certain degree of continuum with respect to suppliers and demandeurs across countries to a leading manufacturer.

4.1.2 Institutional Rationale

i. RTA-Consistency with Multilateralism

As far as tariff liberalization under WTO is concerned, it pertains to bound tariff negotiations. The FTAs help reduce applied tariffs with a chosen trade partner in a calibrated manner with tariff reductions spread over time, that too with reciprocity in the partner country. They therefore co-exist with WTO and help achieve the objectives of liberal trade of the WTO through their building block role.

ii. The imperative of RTAs and a geographical analysis to select trade partners for future

The success of a trade agreement depends on several factors; prominent among them are the criteria for selection of the trading partner and persuasive advocacy with stakeholders. Trading partners must complement each other. Rigour and strategy of selecting products and services for preferential treatment is also necessary. Manufacturing for global competitiveness is organized on the basis of capacities along the value chains, as highlighted earlier. It is important to recognize mutual competitiveness along a given value chain and to build an agreement all along the chain on the basis of respective strengths. An entire ecosystem for trading, including the tariff structure, regulatory ecosystem, logistics and trade infrastructure should be built around these value chains. India in its pursuit of becoming an integral part of global economy must combine its trade-intensification with traditional partners, with those countries wherein trade linkages are still relatively low for example, Eurasia, including Central Asia; South Asia; Africa and Latin America. The focus of its trade integration should be on boarding as many value chains as it can gainfully do with a view to attract investments, technology and employment opportunities and expand markets into potential regions. Production systems are getting regionalized and the center of its gravity has moved towards Asia, therefore India must find opportunities of better integration with this region. Africa, Central Asia and Latin America and the unfinished agenda with the EU have strong promise. All future and existing opportunities should be seen in this perspective.

iii. A lot of discussion has taken place on India's approach to RCEP. RCEP is an important framework for India to pursue. It may not be an option to keep out of this framework anymore, because this will exclude India from a large regional market which is also connected with the rest of the industrial world. With the sluggish WTO and global economic slowdown, it is important to achieve trading frameworks for expansion of markets and scaling up production for competitive pricing. RCEP should be seen from a broad and long- term perspective of India's attempts at securing deeper integration with the rest of the Asian economy. India has FTAs with all except Australia, China and New Zealand. Therefore, China is the most important partner in this arrangement. Industry's wariness about China is understandable but for several reasons there is a long- term opportunity which needs to be recognized. The Chinese economy has been lately slowing down and is likely to remain that way; China is focusing more on its domestic consumption at the moment; it has been facing the American wrath and is likely to continue to do so for some more time and is therefore slightly vulnerable at the moment. As a matter of fact, it needs RCEP badly and should therefore be more amenable to our persuasion. Further, the multilateral system is likely to remain in a stalemate for some time and it is unlikely that US efforts at reigning in Chinese trade practices in the grey area would materialize any time soon, therefore RCEP can at least bring some discipline around these practices. The rest of the membership of RCEP

particularly Japan, Korea and Australia are prominent members of this group and through some tactical give and take should be persuaded to see reason in some of our demands. Some of the areas have been left untouched, for example the state enterprises because we ourselves support a PSE framework. But in terms of size and scope we are nowhere near China. Therefore, we must build an incremental framework around PSEs. We will find support from the three members mentioned earlier and Singapore. Similarly, a discipline on competition is desirable. In brief our success in RCEP negotiations will depend upon our ingenuity in the art of negotiations, coalitions, persistence, tenacity and finally, pace of implementation of domestic reforms. An incremental approach subject to periodic review will suit us the most.

- iv. The objective of increasing mutual trade-related opportunities for the members of RCEP is emphasised by all. A common feeling shared by many is the possibility of fair market access being denied or constrained by non-tariff measures or arbitrary and non-transparent policy measures. Such situations are expected to arise in trade agreements as is shown, for example by CPTPP (Comprehensive and Progressive Trans-Pacific Partnership), and its previous version the Trans Pacific Partnership (TPP).
 - CPTPP, for example, establishes a mechanism to quickly address the concerns of the agreement's members when their exports of goods are adversely affected. There is a precedent of intervention – US-Japan auto trade agreement. This allowed a snapping back of tariff concessions if the prevailing conditions resulted in the market access to be less than that under policies consistent with the obligations accepted under the agreement. India should support efforts towards developing a simple mechanism which would provide quick redressal to those who feel that non-tariff barriers need to be pointed out and addressed for fair implementation of the conditions agreed in RCEP. Such a mechanism, and possibility of snapping back of certain previously agreed market access, could be agreed at the level of the whole membership or at the bilateral level.

4.1.3 Geopolitical Rationale: From Geo-Politics to Geo-Economics

In this backdrop, India's engagements with different countries in various regions would have to clearly focus on geo-economics and any focus on geo-politics must be to an extent that the latter reinforces the developmental outcomes of trade agreements. Hence, quite evidently a perceptible shift is needed from geo-politics to geo-economics in India's international engagements. In other words, it is the economics which should drive politics rather than the other way around and both economic and political objectives must be in sync.

4.2 India's Experience with RTAs: What has gone wrong and why - The Problems

India's FTA experience has been a mixed bag. India's first-generation FTAs have been largely with the South Asian neighbors. India is the pivot of the regional economy in South Asia and though these FTAs are significantly defensive and large segments of India's interest have been left out of the concessions, India has gained significantly. The size, diversity, strength and character of national economies in the region explain the state of these FTAs. India has taken asymmetric responsibilities in the region in line with the unique character of its economy. The effort in the region should be towards dismantling all tariff and non-tariff hurdles to make the region a vibrant production network. South Asian FTAs in our view are a class apart and need special treatment.

Some segments of the stakeholder community have critically commented upon the second-generation FTAs with Association of South East Asian Nations (ASEAN), Korea and Japan. There has been a concern particularly raised with reference to these FTAs which is that they have adversely impacted some domestic sectors. Since impressions are often influenced by individual impact though we discussed the impact of these FTAs on various sectors, we have referred to the Department Related Parliamentary Standing Committee on Commerce, Report No. 137, 2017 focusing on India-ASEAN considering it as the most authentic source, rather than taking into account perceptions often based on hearsay without any deep analysis.

4.2.1 Widening of India's Trade Deficit with FTA Partners: Sectoral Impacts and Insights Review

i. Palm Oil

That India has a trade deficit with all the major FTA partners has been highlighted as a major problem. It has also been observed that India's trade deficit with ASEAN has widened, especially with Indonesia on account of import surge (Parliamentary Standing Committee Report No. 137, 2017). However, the increase in imports from Indonesia is majorly accounted for by raw materials, especially, palm oil. Of this, crude palm oil is a raw material which implies there must be some value addition to these products in India. There has been an increase in import of refined palm oil also. However, the increase cannot be said to be completely on account of India-ASEAN Trade in Goods Agreements as both crude and refined palm oil are special products in

India's tariff commitments to ASEAN under India-ASEAN Trade in Goods Agreement². In addition, import of these products do have a cushioning effect on domestic inflation. It is essentially domestic short supply which has contributed to import demand.

ii. Rubber

The Parliamentary Standing Committee Report observed that there has been an upsurge of imports of rubber and rubber products leading to a decline in domestic rubber price on account of India-ASEAN Free Trade Agreement which is expected to have adverse consequences on rubber farmers. However, the monthly data compiled by Rubber Board of India shows how the consumption of natural and synthetic rubber in India exceeds the production in India. Further, out of the total rubber consumed, nearly 10% of natural rubber and 5% of synthetic rubber is used by automobile tyre manufacturers. Apart, from the tyre industry rubber is crucial raw material for important manufacturing sectors like plastics, automobiles etc. In this sense, imports of rubber support domestic manufacturing through forward linkages and by keeping prices low.

iii. Coffee & Tea

An import surge of low-priced tea and coffee on account of India-ASEAN Trade in Goods Agreement has been observed (Parliamentary Standing Committee Report No. 137, 2017).

However, all the coffee and tea products at HS 8-digit (falling under the HS Code 0901 & 0902 at 4-digit level of HS 2012) are under the category of Special products or Exclusion List in India's tariff commitments to ASEAN under IATIGA. Thus, the FTA cannot be blamed for the imports. On the other hand, total imports of these tea products falling under special category **declined** to USD 2.12 million in 2017-18 from USD 4.25 million in 2016-17. Total imports of coffee products falling under special category only **marginally rose** from USD 92.42 million in 2016-17 to in 2016-17 to USD 105.66 million in 2017-18.

iv. Textiles

The problem observed in this sector was one of 'inverted duty' whereby the import duty on Viscose Staple fiber (VSF) under IATIGA has been reduced to 0% for Indonesia with effect from 1st January 2014, whereas the import duty on Wood Pulp, an input

²For crude palm oil: tariff reduces to 37.5 % by **Dec 2019** in a phased manner and was at 52% in 2016 and 48% in 2017. For refined palm oil: tariff reduces to 45 % by **Dec 2019** in a phased manner and was at 62% in 2016 and 58% in 2017.

for VSF is **higher** (Parliamentary Standing Committee Report No. 137, 2017). However, this problem stands resolved subsequently, now that all the products of HS Chapter 47: Pulp of wood or of other fibrous cellulosic material; recovered (waste and scrap) paper or paper board fall under the categories of NT-1 or NT-2 i.e. categories for which tariffs have already been eliminated by 2016.

4.2.2 Rules of Origin

The Parliamentary Standing Committee report on India-ASEAN FTA has raised the concern that the General ROO of CTSH+ 35% RVC applicable to all the tariff lines is a serious constraint faced by the exporters. The problem needs to be addressed with product-specific rules and better implementation mechanisms.

4.2.3 Standards

Concerns have been raised by food processing sector about the near absence of quality norms for import of processed food products from ASEAN countries resulting in import and consumption of cheap ASEAN processed food products at the cost of domestic food processing sector. This problem also needs to be addressed as this is a major issue, by creating a comprehensive eco-system of standardization.

4.3 India's Experience with RTAs: The Alternative Narrative - Positive aspects

4.3.1 India's Trade and Trade Deficit with FTA Partners

The following observations could be made, comparing pre- and post-FTA phases:

- i. India's total trade has increased with each FTA partner in post-FTA phase.
- ii. It is often not highlighted that with Singapore, India has trade **surplus**: USD 2.5 bn in relation to total trade of USD 17 billion.
- iii. India's total trade is maximum with ASEAN: USD 81 bn.
- iv. India's trade deficit is maximum with ASEAN: USD 12.9 bn.
- v. India's trade deficit has increased the **least** with ASEAN as compared to other FTA partners: 68 percent (over 2009-2017 period).
- vi. Trade deficit must be viewed with respect to capacity to afford it as given by total trade.
- vii. Trade deficit to total trade ratio vis-à-vis ASEAN has decreased from -17.4 percent in 2009 to -15.9 percent in 2017.
- viii. This implies that for the most important trade and FTA partner both in terms of total trade and trade deficit which is the ASEAN the capacity to afford trade deficit has

increased. This is because with respect to increase in total trade between India and ASEAN between pre and post-FTA phases, the increase in trade deficit is lower, hence the trade deficit to total trade ratio has declined!

Structure of Exports and Imports vis-à-vis FTA Partners: Positive Insights:

- i. India's exports are primarily accounted for by non-raw materials with respect to each FTA partner. It ranges between 79 to 97 percent. In the case of ASEAN, non-raw materials account for 79 percent of total exports from ASEAN.
- ii. India's imports are primarily accounted for by non-consumer goods with respect to each FTA partner. It ranges between 78 to 89 percent. In the case of ASEAN, non-consumer goods account for 84 percent of total imports from ASEAN.
- iii. This can be an ideal export and import structure of India vis-à-vis FTA partners.

4.3.2 Trade in Services

Major sectors where India's trade in services has increased via Mode 3 (inflow and outflow of FDI) with the FTA partners viz. Japan, Singapore, Malaysia and Korea include technology (computer software), information communication telecommunications, media advertising, renewable energy generation, infrastructure, real estate, construction, finance, tourism, education and healthcare.

4.3.3 FDI in all the major FTA Partners

Indian companies have been established in most of the major FTA partner countries of India. This Indian FDI outflow to major FTA partner countries not only generates employment opportunities in the partner countries but rather augur India's exports as well as these companies buy back from India, create additional demand for Indian services abroad and enable repatriation of profits back to India and thus contribute to India's GDP.

4.4 RTAs can be more beneficial: Identifying the Hurdles

Lack of competitiveness of India's exports acts as major bottleneck in tapping potential from trade enabled through FTAs/RTAs. Exports in India are constrained by improper access to factors of production, namely, land, labour and capital in India and high cost of these factors of production. However, while work is ongoing to address these dimensions, India cannot remain isolated from the external economic dynamism and must play a pro-active role in setting agenda of trade and economic cooperation with other countries.

4.5 Movement forward: Some Solutions

Some important insights emerge that could show some contours of a way forward in terms of a broad approach that could be adopted and some policy actions taken to help augment India's trade and economic engagements across regions. Some of these dimensions are dovetailed here.

4.5.1 Integrated Approach under FTAs: Trade in Goods, Trade in Services, FDI, NTMs

There is an inevitable interdependence between trade in goods, trade in services and investment such that any FTA needs to recognize the two-way linkages between trade in goods and services and the trade (goods and services) and investment nexus. An integrated approach towards trade in goods, trade in services and investment is also necessitated by global and regional value chains.

4.5.2 Approach towards Trade in Goods

i. Beyond Tariffs

Tariff reduction/elimination is an important part of the strategy but that alone will not be enough. A deeper understanding will involve going into subsequent layers of non-tariff policies, regulatory mechanisms and legal frameworks.

ii. Standards and NTMs / NTBs

India must implement an extensive programme on technical regulations based on international standards. This will facilitate access to partner markets and protect domestic industry from cheap imports. A stronger framework for intellectual property law enforcement is necessary in view of its growing relevance due to the focus on technology products and the need to curb imports of cheap low-quality products. INSS (2018) provides an overarching framework and needs operationalization. For this a nodal point needs to be created for recommending and following up on conceptually-sound actual policy implementation with respect to the entire eco-system of standards, regulations and procedures.

4.5.3 Approach towards Trade in Services

India has very forcefully articulated its concerns on Services related market access issues. Its apprehensions on these concerns getting marginalized by the rest of the membership are justified on the basis of experience of the past.

i. Beyond Mode IV

But we need to recognize the futility of an overbearing focus on the issue of Movement of Natural Persons and shift focus to other modes as well. As a matter of fact while

movement of Natural Persons remains important for us, Mode III i.e. setting up commercial presence has acquired equal importance for us as Indian businesses have become more interested in investing in foreign markets.

4.5.4 Using Trade Remedies under FTAs: Safeguards available

Adequate efforts need to be made to make provision for and use the trade remedies (anti-dumping and countervailing duties) that are available in FTAs/CECAs. These trade remedies and safeguards, however, must be used only when there is sufficient scientifically arrived economic proofs. For this, the ongoing efforts by the DGTR must be strengthened.

4.5.5 Data on Trade under FTAs: Utilization of FTAs

Given the urgent need to assess India's FTAs/ Plurilateral Trade Agreements (PTAs)/CECAs/Comprehensive Economic Partnership Agreements (CEPAs) especially in trade in goods, it is imperative to have a database on the utilization of these agreements. This assumes even more importance in the context of RCEP negotiations in order to take necessary steps towards India's preparedness both in terms of maximizing the export gains from increased market access and minimizing any adverse effects of imports.

4.5.6 Better Inter-Ministerial Coordination, State-wise Outreach and Institutional Mechanism for Stakeholders' Consultation

For any FTAs to be successful in real sense, commitment and convergence, not just in the Department of Commerce but across all other departments relevant for the purpose, besides other non-government stake-holders, particularly the industry, are essential. Even the State Governments also need to be fully on board. Quantification of potential gains tends to marginalize the qualitative benefits which will flow from such a decision. For this a three-pronged strategy is needed:

- i. Constant efforts to bridge communication and information gaps needed on an inter-ministerial basis through 'Regular Briefing Sessions' rather than holding inter-ministerial meetings when a decision has to be taken. Within the ambit of 'Whole of Government Approach', different ministries must be made to feel as a part of the decision-making rather than decision-takers. This applies to every ministry in the government.
- ii. Regular interactions with the state governments is crucial so that adequate sensitization and trade facilitation takes place under cooperative federalism. For this,

an institutionalized outreach process needs to be set in place with a Nodal Agency in Delhi specifically tasked to perform this function on a sustained basis.

- iii. Similarly, both the central and state governments need to institutionalize the process of Stakeholders' Consultation in Delhi and in major cities of the country. This has the advantage of getting timely feedback, including on industry-wide sensitivities, for negotiations as well as informing the industry well in time for any steps that would like to take during the period of transition with the aim of minimizing their adjustment costs. Whenever given adequate time, the Indian industry has shown considerable resilience and adjusted well during several episodes of trade integration of India with the world and regions.

4.5.7 Implementation of FTAs/CECAs

One of the most important steps in making FTAs/CECAs achieve their potential in terms of greater and balanced trade outcomes is by way of strengthening the policy mechanisms of implementation of FTAs/CECAs. This could include several dimensions.

- i. Work Programme of FTA Committees

FTAs and CECAs have institutional mechanism to oversee the operationalization of FTAs. These are in the form of committees that are required to review and implementation of FTAs. These are supposed to often prepare reports to help improve implementation of FTAs. They can also recommend any improvements in the implementation process as well as consider any amendments in the agreement. They are supposed to address concerns if any of the members of the agreement. They need to coordinate the work of sub-committees on various subject matters. Experience suggests that the role of such institutional mechanisms has remained dormant. Therefore, adequate efforts geared towards making such institutional mechanisms more proactive and dynamic would go a long way in making FTAs even more effective. Such committees need to interact with other ministries, state governments and private sector in order to incorporate their concerns if any. The committees also need to conduct impact assessment with the help of various technical experts and professionals with legal background in order to enhance the effects of FTAs by making changes in FTAs from time to time by reflecting new realities.

ii. Implementation Issues Relating to Customs

Apart from the point mentioned above in terms of collection and dissemination of customs data for utilization of FTAs, there are some other issues that need to be focused upon. For instance, there are issues relating to access, information and interpretation of customs notification and circulars. A simplification measure that could be taken is to prepare a database of such notifications and circulars under a separate head of 'FTAs'. This new category needs to be highlighted and provided a separate link on the website of Central Board of Indirect Taxes and Customs (CBIC). Another step could be to establish an exclusive cell in Department of Commerce which handles issues relating to proper interpretation of these notifications which brings convergence in the understanding of exporters, importers and customs officials.

iii. Facilitation for Micro, Small and Medium Enterprises (MSMEs)

The big companies are somewhat in a position to understand and take advantage of FTAs. However, MSMEs often are unable to take advantage of FTAs because of sheer lack of information about FTAs. This is when MSMEs contribute significantly to exports. However, their understanding in terms of various provisions of FTAs is found to be limited, especially in states and remote areas. The MSME Division could directly in collaboration with state governments launch a nation-wide sensitization scheme whereby support relating to potential of FTAs for MSMEs is explained as much as their operational aspects. Such endeavour does not involve any financial support but institutional support to MSMEs which can be in consonance with international obligations.

iv. Improving Capacities for Negotiations

The Department's human resource capacities are hugely over stretched and need augmentation and stability. They also need further specialization through a more focused approach to selection of human resource and lateral complementing from government and private sector. An industry level B team is necessary to support the negotiating team on a standing basis to provide industry inputs of more technical nature and specific sectoral nuances. A broad template of our offensive interests needs to be drawn and a potential ecosystem of regulations needs to be developed around the value chains of interest. India should launch a five-year program for negotiations of FTAs identified based on complementarity and long-term sustainability. Relevant segments of Industry must be associated with the process of negotiations. Sectoral analysis to assess price competitiveness of Indian products in markets of choice should also be done to help better negotiate FTAs. This will also trigger domestic sectoral reforms and restructuring.

It must be noted that FTAs are commercial agreements and anything of interest can be negotiated under that umbrella. So novel and unique approaches must be constantly adopted. For example, unique phasing out periods, specific rules of origins, carve outs of specific interests if any, many such unique provisions can be negotiated. A deep study of some of the mega-agreements such as CPTPP and some bilateral agreements of EU with its trading partners are instructive in this respect. In order to build a sound FTA policy an in-depth understanding of our offensive and defensive interests is necessary. A consensus around such interests is essential. It is necessary to recognize specific segments of value chains of interest and build ecosystems around them facilitated by FTAs among other domestic policy initiatives.

- v. Even with selected non-FTA countries, there should be a regular dialogue on setting up institutional mechanisms to pursue trade interests. Such mechanisms should be very persuasively operated on a regular basis.

05

The US-China Trade War: Impact on India and its Policy Choices



5. The US-China Trade War: Impact on India and its Policy Choices

5.1 Backdrop

The five-year period 2012-13 to 2016-17 witnessed a decline in Indian merchandise exports at an average rate of 4.5 percent per annum. The Ministry of Commerce and Industry initiated a discussion in August 2018 on designing a strategy for doubling India's exports by 2025. This growth from USD 504 billion exports of goods and services in 2017-18 to above USD 1,000 billion in 2025-26 would imply an underlying growth rate of exports of above 9 percent per annum. While merchandise exports constitute close to 63 percent of total exports, the share of service exports has been 37 percent during the last three years, 2015-16 to 2017-18. Assuming these proportions remain unchanged, a doubling of merchandise exports in six years would mean going from the base 2017-18 level of USD 309 billion to about USD 618 billion by 2025-26, and service exports going from USD 195 billion to USD 390 billion. These are challenging targets. They raise the question of whether there are unexplored strategic opportunities in the current global trade situation, including in the looming US-China trade war, which can help India either achieve these targets or at least ensure that there are no significant reversals on the path to achieving them. It is this question that motivates this NCAER paper on how India should react to the trade tensions between the world's two largest economies.

Globally, the multilateral trade discipline that marked the post-war years has been diluted by the emergence of bilateral and plurilateral preferential trade agreements. The web of preferential trading blocs has deflected attention from the consolidation of multilateral trade discipline, a key goal of the World Trade Organization (WTO).

The latest and perhaps most potent shocks to the liberal global trading regime have come from US President Trump's "America First" and "Make America Great Again" policies. Its most extreme manifestation is the trade war the US has declared with China, for the moment in a temporary truce while the US and Chinese negotiators try to avert a tit-for-tat battle.

Most professional economists and economic commentators agree that President Trump's approach to making America great again using trade protection is likely to cause economic losses for the US, China, and the global economy.³ A recent special

³Martin Wolf, Chief Economics Commentator of the *Financial Times*, spoke eloquently about this in his 7th NCAER C D Deshmukh Memorial Lecture, "Challenges for India from the Global Economic Upheavals," 15 January 2019.

issue of the **Journal of Policy Modelling** provides a cross section of such views.⁴ Under these circumstances, what should India do? Should it also raise import tariffs when its exports to the US and China are hurt by higher US and China tariffs? Or should it lower them? Should it respond to opportunities to be part of bilateral or plurilateral free trade agreements enthusiastically or with much caution?

Recent empirical papers attempt similar answers at a global level. Devarajan et al (2018) at the World Bank and elsewhere use a multi-country, multi-sector global CGE model called GLOBE to analyse the economic impact of a full-blown trade war between the United States and its trading partners. They seek to advise developing countries on how they should respond. They conclude that developing countries should refrain from retaliatory action in order to gain from a trade war. These gains would come from the trade diversion away from the warring countries/regions. Developing countries would benefit further from progressively and unilaterally reducing tariffs, pursuing regional trade agreements, and working within the WTO disciplines.

5.2 Policy choices for India facing the headwinds of protectionism and description of simulations

A trade war would impact India's GDP growth rate and trade flows through changes in the global supply and demand of goods and their associated price movements. In the face of a trade war, India could choose to remain passive and do nothing, or it could raise or lower tariffs. What are likely to be the impacts of these different actions? The RCEP is the most prominent trade agreement on the agenda for India in the face of these headwinds. What is likely to be the impact of India being a part of a successfully concluded RCEP?

An NCAER paper seeks to answer these questions by simulating the policy choices and their impact on India's GDP growth and trade. The simulations are done using the Global Trade Analysis Project (GTAP) Model and the GTAP Release 9 database.⁵ The GTAP is a comparative static model containing bilateral trade information, transport,

⁴ Salvatore, Dominick (ed.), 2018. Kaushik Basu shows how US protectionist policies may provide some short-run benefits, but will be detrimental to the US economy in the long-run. Sherman Robinson and Karen Thierfelder show how the collapse of NAFTA and the trade war with other countries will damage the US, and even more so, Canada and Mexico. Justin Yifu Lin and Xin Wang suggest that increased tariff on Chinese imports will not reduce the overall US trade deficit nor increase US jobs. Fred Campano and Dominick Salvatore point out that a better way to close the US trade deficit would be to revitalise some of its faded industries by introducing new technology and making them internationally competitive. Joseph Stiglitz shows how protectionism will have major negative effects on living standards across the world, including in the US.

⁵See <https://www.gtap.agecon.purdue.edu/models/current.asp>. NCAER is the India data correspondent for the GTAP Model. It also works closely on its CGE modelling work with the Centre for Policy Studies (CoPS) at Victoria University, Melbourne, led by Professor Peter B. Dixon, one of the world's foremost CGE experts.

and protection linkages for 57 production sectors across all countries and regions. The production sectors include 14 in agriculture, four in minerals, 24 in manufacturing, and 15 in services. The data is reported for 140 countries/regions. All tables relevant for GTAP model, including sector and region aggregation, technical note on the model and macro-level results are contained in **Annex II**. This study aggregates 57 sectors into 32 model sectors and 140 countries/regions into 22 model regions (**Annex II.1 and Annex II.2**). A technical note on GTAP model is presented in **Annex-II.7**.

The NCAER paper undertakes two sets of illustrative policy impact simulations: first, India's options in a US-China trade war in which both warring countries raise tariffs on agriculture, mining and manufacturing sectors, and second, the impact on India of its joining the RCEP free-trade zone. These simulations are done through uniform tariff changes across agriculture, mining, and manufacturing. There are no tariffs on services, and hence these do not enter in any of the simulations.

In the first trade-war Simulation 1, the US and China raise tariffs uniformly against each other to 20% in agriculture, mining and manufacturing sectors. In a second, follow-up simulation, both the US and China increase their tariffs on imports from India as well, but India does not react. In a third simulation, India also reacts and raises its tariffs against imports of agriculture, mining and manufacturing sectors from USA and China up to 20%. In a fourth simulation, India lowers its tariffs. These four simulations are designed to shed light on the impact of the following questions:

- i. What is the likely impact on India's GDP and trade when the US and China enter into a bilateral trade war, raising their bilateral tariffs to 20% on trade in agriculture, mining and manufacturing sectors?
- ii. What if the US-China trade war spills over to India in this Scenario 2, restricting imports from India, which faces higher tariffs on agriculture, mining and manufacturing sectors up to 20%, but India does not react?⁶
- iii. What if in response to Scenario 2, India also raises its tariffs on agriculture, mining and manufacturing imports from the US and China up to 20%?⁷

⁶On March 4, 2019, Washington announced that it was pulling the plug on GSP for India, which will affect, among others, auto components, industrial valves, and textile materials. President Trump's GSP notification letter to Congress notes that India "has not assured the United States that it will provide equitable and reasonable access to the markets of India." In October 2018, Trump referred to India, "which is the tariff king," calling the US Trade Representative to start negotiations immediately because they wanted to "keep your President happy."

⁷This is not too far-fetched. In June 2018, India apparently notified WTO of its decision to impose higher import tariffs on 30 US goods - including motorcycles and heavy machinery, and including 18 iron and steel items, as well as a large number of agro products. ""Our estimates place a combined USD 240 million loss for India on account of Mr. Trump's steel, aluminium tariffs, and we felt a reciprocal tariff of a similar amount on US imports would be fair," a senior Commerce Ministry official said. Available at: <<https://www.business-standard.com/article/economy-policy/india-will-impose-higher-tariffs-on-30-us-goods-1180612014111201.htm>>

iv. What if in response to Scenario 2, India actually reduces its tariffs to 20% in sectors that have existing tariffs above 20% on imports from the US and China? These imports would be agriculture, food, beverages and tobacco, and motor vehicles.

In our second set of hypothetical experiments we simulate two scenarios in which India joins a regional trade bloc by eliminating tariffs on mining and manufacturing sectors and agriculture. The following scenarios simulate India joining an Asian trade agreement:

v. India joins an Asian region including China, Japan, ASEAN, Newly Industrialized Economies (NIEs) and Australian and New Zealand (ANZ), somewhat mimicking RCEP-like tariff elimination, but in the absence of a US-China trade war, i.e. before the situation envisaged by Simulation 1 above.

vi. India joins a free trade region as in Simulation 5, but alongside a US-China trade war as in Simulation 1.

The six simulations explored in this paper are described here in one place for ease of comparison and comprehension.

Simulation 1: The US and China increase tariffs against each other up to 20% on agriculture, mining and manufacturing sectors. None of the US-China bilaterally traded sectors currently has tariffs above 20%.

Simulation 2: The US and China raise tariffs against each other up to 20% on agriculture, mining and manufacturing sectors, and do the same against India. None of the bilaterally traded sectors with India currently have tariffs above 20%. India turns the other cheek, and does not react.

Simulation 3: The US and China raise tariffs against each other up to 20% on agriculture, mining and manufacturing sectors, and do the same against India. India responds by increasing its import tariffs on the corresponding sectors up to 20% against the US and China. India has existing tariffs above 20% on imports in agriculture, food, beverages & tobacco, and motor vehicles. These are assumed to remain at their existing rates.

Simulation 4: The US and China raise tariffs against each other up to 20% on agriculture, mining and manufacturing sectors, and do the same against India. India responds by lowering its above-20% import tariffs on corresponding sectors down to 20% against the US and China.

Simulation 5: The impact of India joining an RCEP-like free trade agreement where the bilateral tariffs of member countries are brought down to zero for agriculture, mining and manufacturing sectors.

Simulation 6: The impact of joining an RCEP-like free trade agreement in the presence of the US-China trade war as in Simulation 1.

5.3 Simulation Results

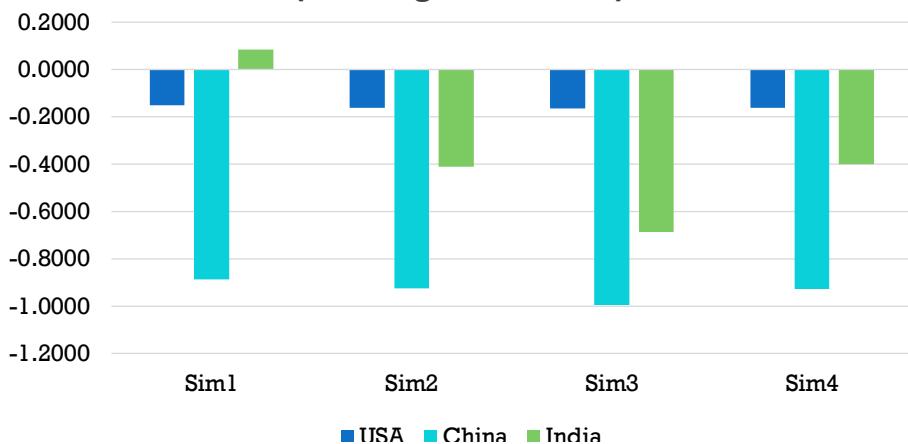
5.3.1 A US-China trade war and India

In a bilateral trade war, both the US and China stand to lose in terms of GDP, exports and imports in all the first four simulations (**Figures 5.1 to 5.3 and Tables Annex II.3 to II.5**). India gains in terms of GDP, exports and imports in the situation described by Simulation 1. Such gains would depend on right policies and follow-up measures. However, when the US-China trade war applies also to India, which faces higher tariffs from both, India stands to lose in GDP, exports and imports in Simulation 2.

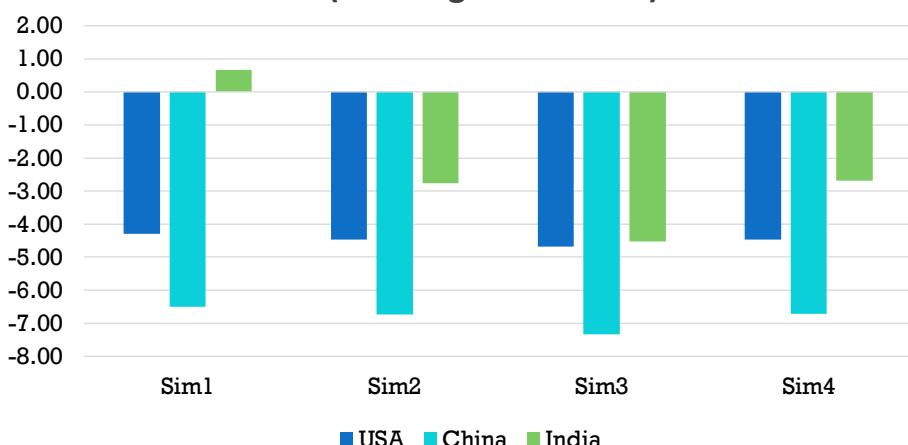
The losses increase further when India responds by increasing its tariffs on imports from the US and China, as in Simulation 3. The loss in India's GDP in Simulation 3 increases by a multiple of 1.7 times compared with the GDP loss in Simulation 2, when it does not raise its tariffs. The losses are 3.4 times higher for exports and 1.6 times higher for imports in moving from Simulation 2 to Simulation 3. Simulation 3 indicates that it would not be sensible for India to raise tariffs in a US-China trade war.

Simulation 4 portrays the scenario in which India is hit by higher tariffs because of the US-China trade war but India actually reduces its tariffs to 20% on products that have more than a 20% tariff. Though GDP, exports, and imports all still fall, the declines are the smallest among the three simulations (Scenarios 2, 3 and 4) that model India facing higher tariffs because of the US-China trade war. The sectors with tariffs higher than 20%, which would have their tariffs reduced, include agriculture, food, beverages & tobacco, and motor vehicles. It is probably for the reason of the limited number of items involved that the absolute results of Simulation 4 are not significantly different from the ones in Simulation 2. Deeper tariff cuts that would cover more items could possibly provide even better results for a Simulation 4 when India reduces its tariffs in a US-China trade war to take advantage of trade diversion.

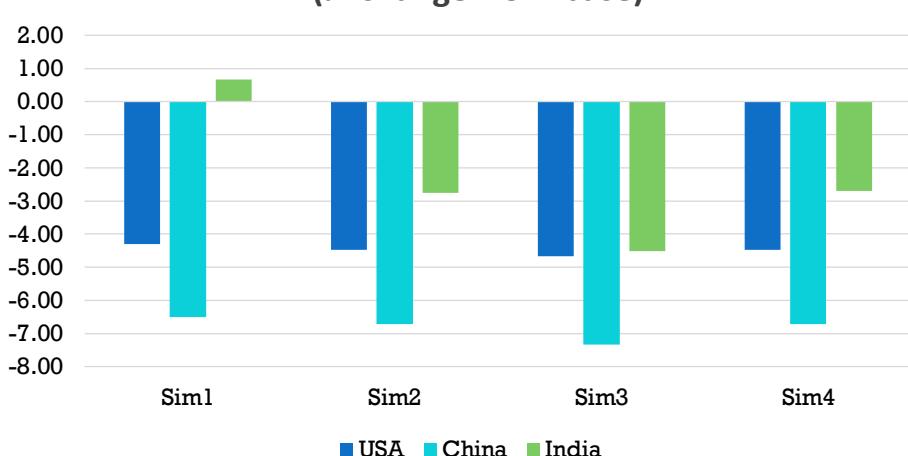
**Figure 5.1: Increase in GDP, , Simulations 1-4
(% change from base)**



**Figure 5.2: Increase in Exports, Simulations 1-4
(% change from base)**



**Figure 5.3: Change in Imports, Simulations 1-4
(% change from base)**



The overall GDP results indicate that it would be to India's benefit not to respond by increasing its tariffs even if the US and China impose the same tariffs on imports from

India. Certainly, at the very least, the results indicate that a knee-jerk, tit-for-tat approach may not be the soundest one to pursue without greater examination. This finding is fully consistent with the global analysis cited earlier done for all developing countries by the World Bank Acting Chief Economist and NCAER non-resident Senior Fellow, Shantayanan Devarajan, and his co-authors (Devarajan, S., et. al., 2018).

The US-China trade war in **Simulation 1** (in which no tariffs are imposed on India) boosts India's GDP, private consumption, and investment (**Annex II.4**). Beyond the impact on GDP, it is useful also to look at changes in private consumption and investment flows, i.e. in the composition of the GDP change. The increase or decrease in private consumption (as a proxy for welfare) may be more than that in GDP. The increase in GDP can be less than the increase in private consumption for several reasons. One reason that is relevant in these simulations is that the tariff changes under consideration cause the terms of trade to improve, allowing consumption to increase without the same increase in GDP because investment comes down. The reverse would be true if private consumption increases proportionally less than the GDP increase. Such changes in GDP and consumption can, of course, be negative as well. Another way to look at the simulations is whether the economy is investing in building new capital that would enable a higher and sustained rate of growth in the future. Such increases in investment relative to GDP are indicative of the economy becoming more ready for future growth. Of course, exploring the second round of the impact of additional capital in the economy can only be captured through a dynamic CGE model, which we are not using.⁸

In the case of the US-China trade war in **Simulation 1**, the increase in investment relative to GDP (percent change in investment *minus* percent change in GDP), at 0.34%, is higher than the corresponding difference between the change in private consumption relative to GDP at 0.09%. Commensurately, when the US and China impose tariffs on imports from India in **Simulations 2, 3 and 4**, the damage to investment is relatively more than to consumption. **Simulation 4** minimises such damage for India, i.e. when it lowers its tariffs on imports of agriculture, food beverages & tobacco, and motor vehicles from the US and China.

⁸ A proposal to support the building of a dynamic CGE model for India at NCAER in collaboration with CoPS in Australia is currently under review with the Asian Development Bank and with the Ministry of Commerce.

5.3.2 India joins an RCEP-like Free Trade Area

This discussion provides scenarios of the potential benefits for India from joining a large trading bloc, taken to be similar to RCEP. This turns out to be beneficial for all the countries/regions of the RCEP.

Simulation 5 is about joining an RCEP-like free trade zone when the US and China are not fighting a bilateral tariff war. **Simulation 5** shows that GDP, exports, and imports of all member countries increase, except for the exports of Japan (**Figures 5.4 to 5.6** and **Annex II.3 to II.5**). China and India turn out to be the two major gainers in terms of GDP and exports. Both these countries, perhaps China less so, have surplus unskilled labour resources and a wage rate advantage. China and Japan are the major gainers for imports. India's GDP increases by 0.88%, compared with 0.34% for China. India's exports grow by 11.5%, the highest rate among all ASEAN countries/regions. India's imports grow by 7.1%. India benefits from efficiency gains.

Simulation 6 is similar to **Simulation 5**, with the additional assumption of the US and China having gone to a trade war as depicted in **Simulation 1**. Recall that China was a major loser in its GDP (-0.89%) when it went to war with the US in **Simulation 1**. China's increase in GDP arising from RCEP formation is 0.34%. However, RCEP formation, when China is already in a tariff war with the US, does not offset its GDP loss arising from the tariff war: China's GDP in **Simulation 6** declines by 0.53%. GDP in all other RCEP countries/regions increases: China's GDP losses add to India's gains. India outsmarts China and shows the highest increase in GDP at 0.97%, higher than what it gains even under **Simulation 5**. India turns out to be a winner in exports, with an increase of 11.7%. China is a loser in imports.

India gains in terms of GDP, private consumption and investment under both **Simulations 5 and 6**. GDP increases by 0.97% in **Simulation 6**, higher than the corresponding increase of 0.88% under **Simulation 5**. Private consumption and investment increase under **Simulation 5**, private consumption by 0.56% and investment by 0.77% (**Annex II.6**). The corresponding pattern of growth in GDP, private consumption and investment under **Simulation 6** remains similar to **Simulation 5**, though with greater intensity. In **Simulation 6**, Investment increases by 1.22% compared with GDP growth of 0.97% and consumption growth of 0.73%.

**Figure 5.4: Increase in GDP, Simulations 5 & 6
(% change from base)**

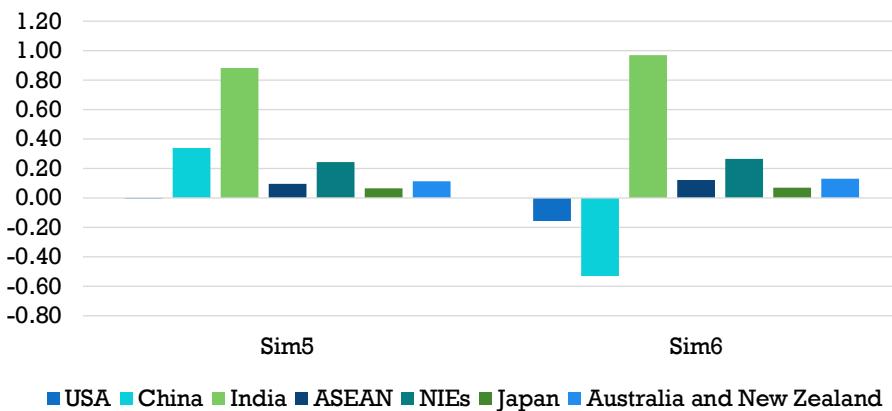


Figure 5.5: Increase in Exports, Simulations 5 & 6 (% change from base)

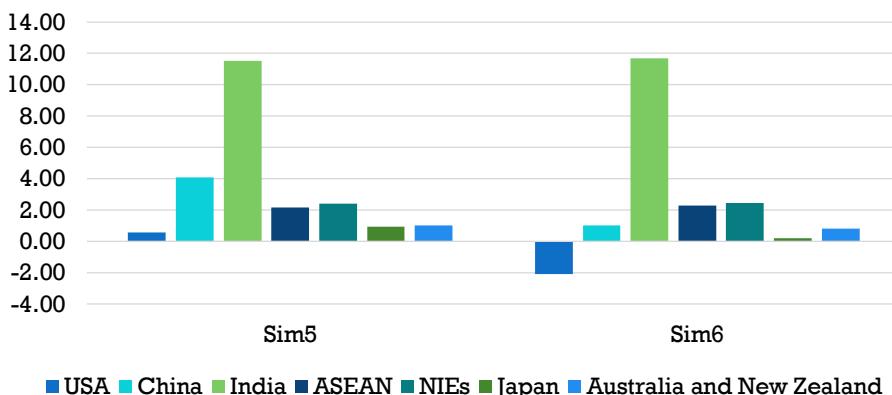
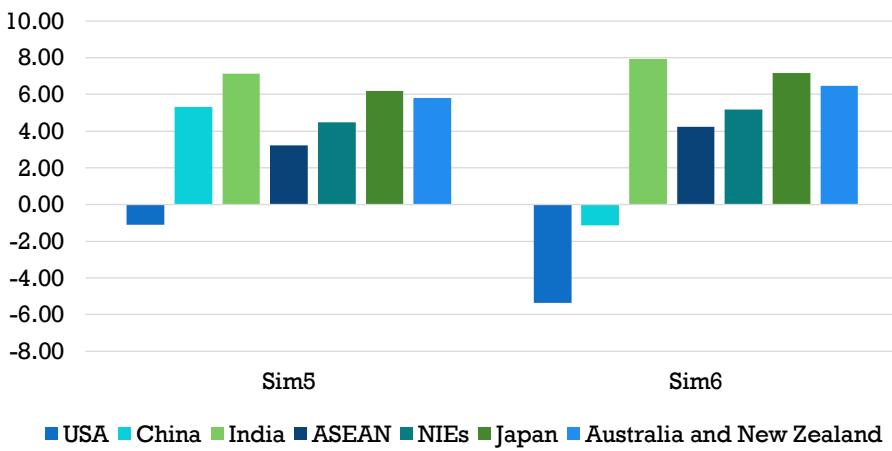


Figure 5.6: Increase in Imports, Simulations 5 & 6 (% change from base)



5.4 Conclusion

India needs to give high priority to undertaking quantitative, rigorous, computational, model-based research on strategic trade policy, including studying the impact of participation in plurilateral trade agreements. All large economies have such capacities in their research institutions and even in government. This NCAER paper was prepared for the High-Level Advisory Group (HLAG) on Trade Policy chaired by Dr Surjit Bhalla.

Faced with growing protectionism globally and the possibility of a major US-China trade war and Indian exports facing higher tariffs, Indian policymakers are considering the impact of these developments and choosing between different policy responses. This NCAER background paper explores the impact of several broadly defined scenarios against 1) a base-case US-China trade-war scenario in which the tariffs facing India do not change; 2) India faces higher tariffs, but does nothing; 3) India retaliates by raising tariffs; and 4) India lowers tariffs for imports from the US and China. The paper also explores two further scenarios of an RCEP-like FTA of which India is a part 5) in the absence of a US-China trade war and 6) in the presence of one.

The following are some of the major findings of this work:

- i. In a bilateral US-China trade war, while both the US and China stand to lose in terms of GDP, exports and imports, India stands to gain.
- ii. India stands to lose when the US-China trade war applies also to India, which faces higher tariffs from both. India's losses increase further when India responds by increasing its tariffs on imports from the US and China.
- iii. A knee-jerk, tit-for-tat approach may not be the soundest one to pursue without greater examination. It may not be sensible for India to raise tariffs in a US-China trade war. In fact, reducing own tariffs could be a wiser step.
- iv. A hypothetical RCEP-like free trade area, when the US and China are not fighting a bilateral tariff war, turns out to be beneficial for all member countries, particularly for India.
- v. India gains even more from joining the RCEP-like free trade area when the US and China are indulging in bilateral trade war.

Given the short, focused, and time-bound nature of the work of the HLAG, the paper was done quickly to provide quantitative assessments of the likely impact of several trade scenarios involving China, the US, India and an RCEP-like regional trade bloc. It is part of a growing exercise at NCAER to build on its existing work in CGE modelling so that trade policy and a range of other simulations in diverse policy areas can be modelled and used as guidance for policy making.

06

India's Services Exports: Need to Diversify



6. India's Services Exports: Need to Diversify

6.1 Context

The structure of economic production is continuously evolving, with trade in services playing an ever-greater role. Over the past 20 years, trade in services has become the most dynamic segment of world trade, growing more quickly than trade in goods. Figures from the WTO show trade in commercial services was USD 4.8 trillion in 2016, up from USD 2.9 trillion recorded in 2006. And trade in services is forecast to grow significantly, increasing to USD 12.4 trillion in 2030, accounting for around 25% of all trade.

There has been much attention regarding India's services sector economy defying the conventional laws of structural transformation and economic development. Services sector not only is the largest contributor to India's GDP but the sector has left its imprint on the world services trade landscape. India's commercial services exports rose by 3.5% to USD 161 billion in 2016 even as the global exports rose by a measly 0.1% and that of Asia rose by 0.9%.

For India, the largest sectors that dominated exports in this dynamic economy were Computer and Information and other Business services. Indeed, India is the largest Computer and Information service exporter in the world at around USD 74 billion in 2014. This is quite impressive and highly unique for an emerging market. However, it is interesting to point out that India is behind China in more traditional export services, such as, Transport, Travel, and Manufacturing services.

India's increased integration with the global economy has exposed the country to several downside risks – most notably the export performance of the country during the global financial crisis. To place the country on a sustained higher growth path and hedge against down-side risk exposures, there is an immediate need to identify those sectors and sub-sectors which have higher and stable returns to public and private interventions. The services sector stands out in this context as, on one hand, it has largest share in India's GDP; while on the other, it has revealed higher potential for exports.

The Central Government has identified twelve Champion Services Sectors for promoting their development, and realizing their potential. These include Information Technology & Information Technology enabled Services (IT &ITeS), Tourism and Hospitality Services, Medical Value Travel, Transport and Logistics Services, Accounting and Finance Services, Audio Visual Services, Legal Services, Communication Services, Construction and Related Engineering Services,

Environmental Services, Financial Services and Education Services. This initiative will enhance the competitiveness of India's service sectors through the implementation of focused and monitored Action Plans, thereby promoting GDP growth, creating more jobs and promoting exports to global markets. The Action Plans to be prepared and implemented by the Ministries/Departments concerned shall develop a vision for each of these identified Champion Sectors in the year 2022 and enumerate steps that need to be taken to achieve that vision.

6.2 Services Trade: New Emerging Opportunities and Challenges

The role of services in production, consumption, and trade has evolved dramatically in the last few decades. Information-related and transport technologies have splintered production locationally and facilitated the separation of production and consumption over greater distances. At the same time, they have greatly shrunk space and time, providing a platform for the explosive growth of international trade and investment.

The world of policy, therefore, has been trying to catch up with the evolution of services and “servicification” in the global economy where services are increasingly recognised as a prominent source of value creation, employment and growth. Today no GVC is possible without well-functioning transport, logistics, finance, communications, and other business and professional services. In fact, without services, production and trade would not be feasible.

Secondly, the digital revolution has been deeply transformative. It is a key driver of innovation and has brought about new products and new ways of producing and consuming old ones. It has reshaped business models and injected an unprecedented level of inclusiveness into commerce.

The smallest enterprises can today aspire to serve markets worldwide. At the same time, large multinational firms have also relied increasingly on the Internet to do business, coordinate physically disperse operations and exchange information. Digitized commerce relies very heavily on services, but also requires the physical assets of logistics providers, such as express delivery companies, to complete transactions where the output is physical.

6.3 Leveraging India's Potential in Services Sector for Greater Export Revenue

India's services sector, in comparison to agriculture and industry, has witnessed the most stable and sizable growth rates over the past twenty-five years, and also makes

the largest contribution to India's GDP. The services sector has also made a prominent imprint in India's export earnings – since 2010 it has continuously remained a surplus sector with the value of surplus reaching USD 28,135 million in 2016.

Table 6.1: Sectoral growth rates and contributions to GDP

	1991-92	1996-97	2001-02	2006-07	2011-12	2016-17
<i>Annual growth rate (at factor cost and in 2004-05 prices)</i>						
Gross Domestic Product	1.52	7.82	5.52	9.57	6.69	6.62
Agriculture & allied activities	-1.95	9.92	6.01	4.16	5.02	4.88
Industry	-0.25	7.73	2.17	12.9	6.69	7.01
Services	4.32	6.83	6.54	10.09	7.06	6.92
<i>Sectoral contribution to GDP (in percent)</i>						
Agriculture & allied activities	28.6	26.27	22.42	17.37	14.37	11.63
Industry	20.27	21.96	20.03	20.66	20.3	20.3
Services	51.13	51.78	57.55	61.97	65.33	68.06

Source: Handbook of Statistics on Indian Economy, RBI

The services sector in India is considerably heterogeneous for a unitary policy intervention. Table 6.2 illustrates this case in point, wherein we can see that 'Telecommunication, Computer and Information Services' contribution to services exports is almost 2.4 times that of the second-largest sub-sector. This concentration of export contribution requires addressing to ensure de-risking of exports growth from external shocks to any individual sub-sector.

Table 6.2: Composition of services exports as percentage of total service exports

Services	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Telecommunications, computer and information services	45.39	46.53	47.46	47.65	49.62	46.80
Other business services	17.43	19.53	18.76	17.98	18.79	20.20
Travel	13.10	12.36	11.81	12.86	13.78	14.25
Transport	12.95	11.90	11.45	11.06	9.08	9.72
Financial services	4.23	3.40	4.38	3.58	3.20	3.13
Others	3.64	2.72	2.04	2.85	1.45	1.50
Insurance and pension services	1.87	1.53	1.40	1.39	1.30	1.35
Construction	0.57	0.69	0.88	1.02	1.01	1.31
Personal, cultural, and recreational services	0.28	0.63	0.87	0.75	0.86	0.85
Government goods and services	0.34	0.39	0.32	0.34	0.37	0.36
Charges for the use of intellectual property	0.20	0.21	0.39	0.33	0.32	0.35
Maintenance and repair services	-	0.08	0.14	0.11	0.10	0.11
Manufacturing services on physical inputs owned by others	-	0.05	0.10	0.07	0.12	0.07
Total	100	100	100	100	100	100

Source: Database on Indian Economy, RBI

As regards other key sectors, education sector holds immense potential provided Government is able to address the critical issue of quality and improving regulatory transparency. With the growing private sector investment in the sector, the Indian higher education system has emerged as one of the largest in the world. Over the past decade, the number of universities in the country has increased at a CAGR of 7.5% (from 272 to 556) while the number of colleges has grown at a CAGR of 11% (from 11,146 to 31,324).

While amongst the developing countries India is a major hub of foreign students, further policy support could make India the global hub of education service providers. There were officially 45,424 foreign students enrolled in India in 2015-16, the latest year for which data is available from the All India Survey on Higher Education conducted by the Ministry of Human Resource Development. In contrast US had more than 1.2 million foreign students and Australia had, in 2015, 645,185 international students enrolled.

Similarly, the healthcare sector as an industry is expanding rapidly in India. This sector is predominantly privatized with almost 75 to 80% of hospitals being managed by the private sector. This sector is expected to grow at a CAGR of 15% and will reach around USD 280 billion by 2020. It is undergoing a metamorphosis by broadening the focus of its services using technology, deliverables, and newer applications.

The above situation demands that there is a need for a detailed assessment of individual sub-sectors within the services sector. The 12 Champion Services Sectors identified by the Central Government would be a good starting point to prepare the services export diversification strategy. These services sectors present comprehensive potential for enhancing India's GDP, exports, employment and other economic outcomes.

6.4 Education Services

Amongst the developing countries India is a major hub of foreign students. Education services hold immense potential, provided the Government is able to address the critical issue of quality and improving regulatory transparency. With the growing private sector investment in the sector, the Indian higher education system has emerged as one of the largest in the world. Over the past decade, the number of universities in the country has increased at a CAGR of 7.5% (from 272 to 556) while the number of colleges has grown at a CAGR of 11% (from 11,146 to 31,324).

6.5 Health Services and Medical Value Travel

The healthcare sector is expanding rapidly in India. This sector is predominantly privatized with almost 75 to 80% of hospitals being managed by the private sector. This sector is expected to grow at a CAGR of 15% and will reach around USD 280 billion by 2020.

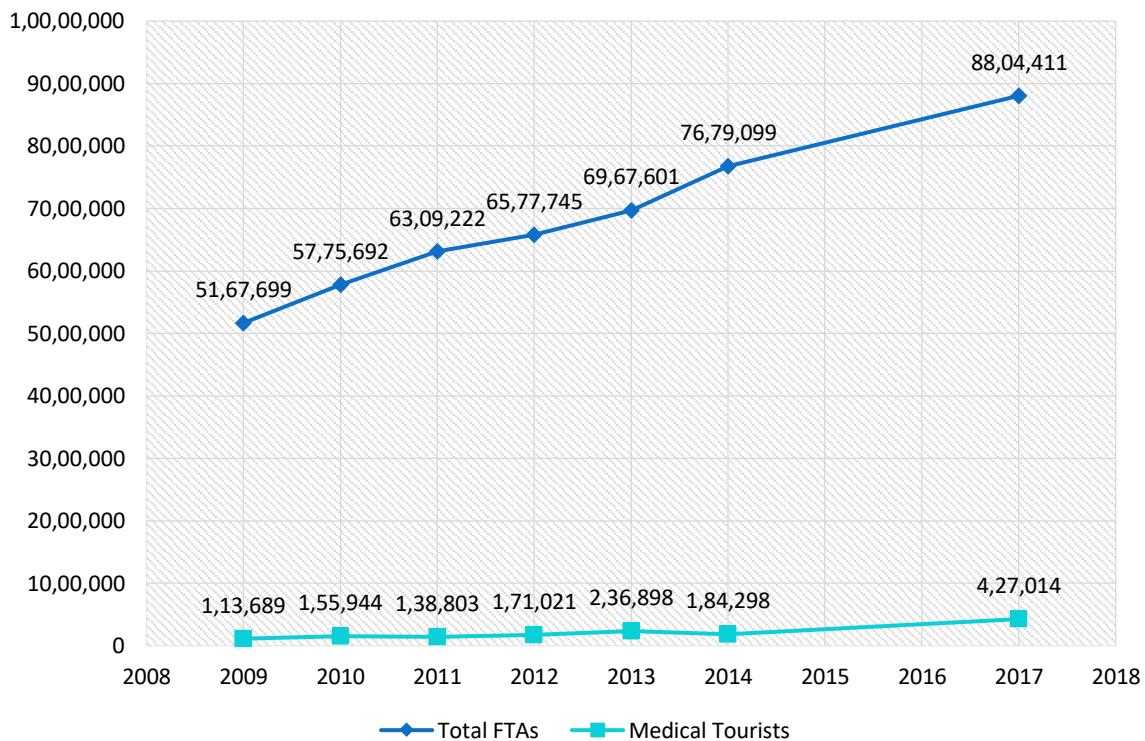
Within healthcare, the Medical Value Travel (MVT) sector shows immense potential; between 2012-2018, the sector grew at a CAGR of 20%. It is estimated that India will account for 6% of the global MVT market share by 2023. There is a need to identify and implement specific policy support initiatives, which could make India the global hub of education and health services.

India must consider significantly simplifying the process of applying for a medical visa, if it is to realise its potential as an MVT hub. Provision of visa exemptions to nationals of focus countries (especially other South Asian countries) travelling to India for medical purposes could be a first step in this direction. Creating a Medical Tourism Campaign, within the Make in India Campaign will help actively promote India's image as an MVT hub. India can also legitimise and accredit medical tourism professionals who help match patients internationally with treatments in India.

6.5.1 Global Industry Overview and India's Relative Performance

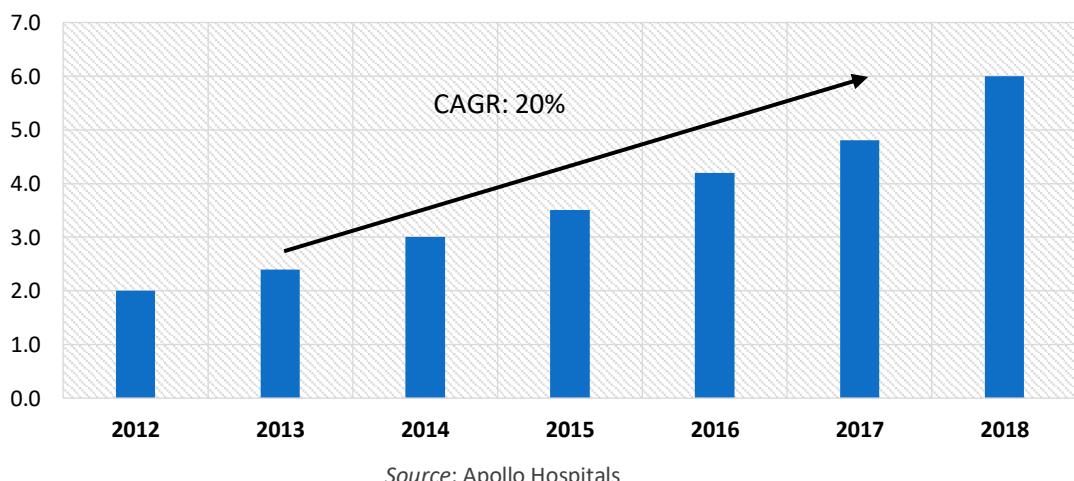
- i. The global MVT market was valued at ~USD 61 billion in 2016, and is expected to grow at a CAGR of 15% to reach USD 163 billion in 2023.
- ii. The Medical Tourism market in India was valued at ~USD 3.9 billion in 2016; it is expected to reach USD 8 billion by 2020. The India-specific medical value market is projected to represent only 6% (~USD 9B) of global market share by 2023.

Fig. 6.1: Inbound Tourism in India: Total Foreign Tourist Arrivals vs Medical Tourists



Source: Ministry of Tourism (Data not available for 2015 and 2016)

Fig. 6.2: Indian Medical Tourism Industry (USD Billion)



Source: Apollo Hospitals

- iii. Key sources of global outbound medical tourism are developed regions such as USA and UK and emerging regions like Russia, China and Latin America. Majority of inbound MVT in India is accounted for by SAARC countries (primarily Bangladesh, Maldives and Afghanistan), and African countries (Kenya, South Africa and Nigeria). However, the number of inbound medical tourists from Russia, CIS countries and Myanmar has been on the ascent recently.

iv. Key Growth Drivers of the Industry include:

- Rising healthcare cost coupled with limited or no insurance for large section of population;
- Increase in geriatric population in developed countries;
- Shortage of specialised care and expertise in areas such as oncology and cardiology;
- Increase in disposable income, particularly in emerging markets;
- Better (actual as well as perceived) reliability and credibility of healthcare facilities through increasing popularity of accreditation;
- Sustained marketing initiatives by hospitals as well as host nations;
- Increase in propensity to travel largely as a result of better and more affordable connectivity.

6.5.2 Global Best Practices

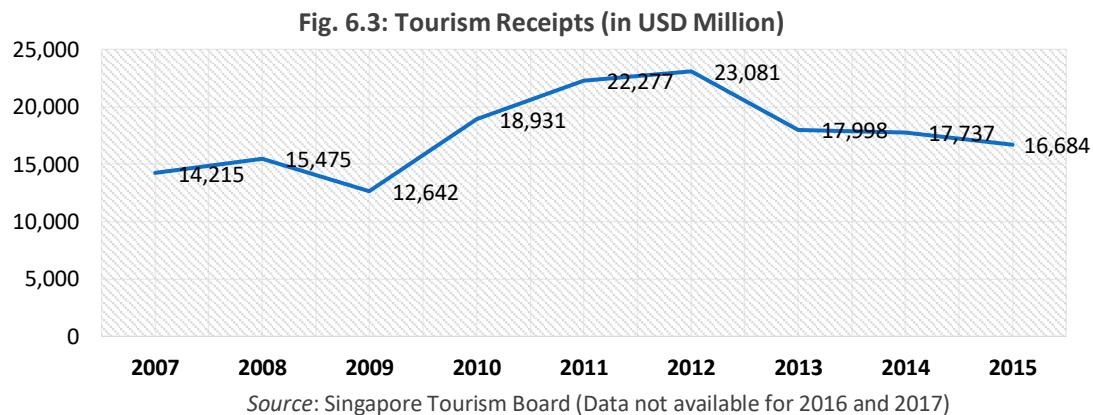
i. Thailand

- Cosmetic surgery and dental surgery are most popular treatments among foreigners. Thailand also provides integrated wellness centers which includes massage, spa and other restorative activities.
- Thai Hospitals were among the first in Asia to be medically accredited and due to this first-mover advantage, some of its major private facilities have managed to establish itself as popular destination for medical travel. **Hospitals in Bangkok serve more than 43% of medical tourists coming to Asia.**
 - **Thailand was among the first in Asia to have hospitals accredited by the Joint Commission International (JCI) which is considered the gold standard in global healthcare.** It also has the highest number of JCI accredited organisations in Southeast Asia, currently at 64 (see **Annex III** for additional details).
- Since 2003, the Thai Government has attempted to make Thailand a global centre for medical tourism through a Centre of Excellent Health Care of Asia initiative. **Efforts at patient recruitment have included international road shows and tax exemptions for investment in new health facilities that target medical tourists.**
 - Over half of the patients treated at Bumrungrad Hospital, one of the largest private hospitals in Thailand, are overseas patients and account for ~60% of hospital revenue.
- Thailand currently receives over 2x more visitors than the next largest country (Singapore) due to this niche branding.
- The combination of quality care and low service cost makes Thailand very competitive in attracting overseas travelers. While other regional leaders like Singapore and South Korea are competing for many of the same visitors with high quality care, medical tourists also value the unique attractiveness of Thailand's low-priced hotels, culture, shopping and service-minded tourism industry.

- Majority of medical tourists in Thailand are from Japan, Myanmar, US, Australia and Middle East Thailand's medical tourism industry majorly focuses on two categories -- international patients with high purchasing power or insurance coverage and retired citizens seeking temporary or permanent residency in Thailand.
- In 2016, the Thai Government announced a ten-year strategic plan (2016-2025) that aims to develop Thailand as a hub for wellness and medical services (see **Annex III** for more details)
 - Key government entities involved in the implementation of this plan include: Ministry of Public Health, Ministry of Commerce, Board of Investment and Tourism Authority of Thailand.

ii. Singapore

- Once a leading medical tourism destination, Singapore is losing market share to competitors like Malaysia.
 - Industry experts believe that the appreciation of the Singapore dollar has driven up costs resulting in lower medical tourism receipts.



iii. Malaysia

- Between 2007-2014, Malaysia's medical tourism industry grew at a CAGR of 16.5%; it grew by almost 25% in 2016, raking in an estimated RM1.15 billion in hospital revenue.
- Malaysia Healthcare Travel Council (MHTC) is an agency under the Ministry of Finance tasked to facilitate and promote the healthcare travel industry of Malaysia by coordinating industry collaborations and building public-private partnerships, at home and abroad
 - MHTC has a concierge service and lounge at KLIA and Penang International Airport with a meet-and-greet service for medical tourists, immigration facilitation and an avenue for medical tourists to relax while waiting for their transport to the hospital.
- The government's plans to liberalise the aviation sector to create an aviation hub in the 9th Malaysian Plan and to support the development of Low-Cost Carrier Terminal

(LCCT) and budget airlines has also had a strong impact on the development of medical tourism.

Table 6.3: Medical Tourism Receipts

Year	Medical Tourism Receipts (RM millions)	CAGR
2000	33	48%
2006	204	35%
2011	511	35%

Source: MHTC

- The vast majority of Malaysia's medical tourists come from Indonesia, China, India, Australia, the UK and the Middle East.
- Most of the private hospitals are accredited by the Malaysian Society for Quality in Health (MSQH) and the Association of Private Hospitals Malaysia (APHM). The accreditation is also endorsed by the government through MHTC. These accreditations are clearly stated in important government portals such as MHTC that could be easily accessed by potential clients for health tourism.
 - The Health Ministry regulates the prices that private hospitals can charge patients so medical tourists know they will not be overcharged.

6.5.3 Potential for India

Given the current state of the market, there is significant potential for India to increase its share in MVT and use the sector to drive export growth.

- i. India has the largest pool of doctors and paramedics in South Asia:
 - ~9.8 lakh allopathic doctors, ~3.5 lakh dental surgeons, ~6 lakh Ayush doctors and ~20 lakh nurses. With a large number of doctors, there is a high level of competency and capability in adoption of newer technologies along with innovation and fresh treatment methods. Many of the doctors have worked in globally reputed medical institutions during their tenure.
- ii. Huge cost arbitrage vis-à-vis developed countries as well as other Asian peers.

Table 6.4: Cost arbitrage vis-à-vis developed countries and other Asian peers

Treatment (USD)	US	UK	Thailand	Singapore	India
Heart Surgery	100,000	40,000	14,000	15,000	5,000
Bone Marrow Transplant	250,000	290,000	62,000	150,000	30,000
Liver Transplant	300,000	200,000	75,000	140,000	45,000
Knee Replacement	48,000	50,000	8,000	25,000	6,000

Source: ICICI Securities

- iii. Cardiology, neurology, oncology and orthopedics are key treatments sought by patients. India also enjoys high credibility in wellness and prevention and Alternative Medicine (see **Annex III** for more details):

- Dental tourism accounts for 10% of the medical tourism and the government is keen to promote it. India provides competitive cost advantage at 1/10th of the cost of the US and Europe.
- iv. In 2015, the Ministry of Tourism constituted a National Medical & Wellness and Tourism Board⁹ to provide institutional framework and promote medical tourism, wellness tourism and Yoga, Ayurveda Tourism and any other format of Indian medicine covered by Ayurveda, Yoga, Unani, Siddha and Homeopathy (AYUSH).
 - The Board offers financial support to accredited Medical and Wellness Tourism Service Providers, Chambers of Commerce and other organisations as Marketing Development Assistance, for publicity, organising workshop/events/seminars and for organising Wellness and Medical Tourism Promotion shows.
 - This Board was (as last reported in 2017) also in the process of drafting a national policy on medical tourism.
- v. High-performing private healthcare institutions:
 - In stark contrast to many other countries, India has a strong and growing private corporate hospitals sector – privately owned hospitals such as Apollo, Fortis, Max etc. drive the majority of India's MVT. As this sector continues to grow in India (and, by consequence, as the advantageous position becomes entrenched), the relative share of the MVT market will also increase accordingly.
- vi. Potential to become a South Asia hub:
 - There is potential for India to capture a greater number of customers from the South Asia region (Bangladesh, Bhutan, Pakistan, Nepal etc.) who may otherwise travel to Thailand/Singapore for their treatments – with the right policy maneuvers, India can capture increasing share in South Asian customers and become a South Asia hub for MVT.
- vii. Leveraging Indian diaspora:
 - For major healthcare procedures, economic and social factors often drive members of the Indian diaspora to return to their home country for treatment. Given the increasing prevalence of MVT worldwide, India can expect to see higher amounts of MVT-related travel from members of its diaspora, and can likely capitalize on this diaspora as a 'competitive advantage' to further boost overall MVT market share.
- viii. Expertise in Assisted Reproduction/IVF:
 - According to the Indian Society for Assisted Reproduction (ISAR), there are some 400 in vitro fertilization (IVF) clinics in India, providing an estimated 30,000 assisted reproductive treatment a year at an affordable cost of USD

⁹Chair: Dr. Mahesh Sharma, Minister of State (Independent Charge) for Tourism and Culture.

1,800 – 5,000. HCG is one of the few notable organized players in the sub sector through its acquisition of Milann (currently at 7 centers).

6.5.4 Challenges

- i. Corruption:
 - Medical tourists coming to India are frequently duped into paying extra by hospital middlemen and touts. Most often, self-appointed translators – who are the first contact of these tourists in India – take them to the hospitals that pay them the highest commission.
 - There exists no registration/accreditation process to ensure transparency and accountability of facilitators.
- ii. Stringent medical visa regulations:
 - The cost of a medical visa is ~3x the cost of a tourist visa.
 - Issuance of a medical visa requires the physical presence of the patient in the embassy and entails a long waiting period.
 - Complex procedure for converting a tourist visa to a medical visa.
 - If, upon consultation with a doctor, a patient on a tourist visa elects for surgery, he/she must first convert their tourist visa to a medical visa (which is a long, arduous process).
- iii. Poor hygiene perception, inadequate ground infrastructure, high boarding costs and lack of amenities for medical tourists at the airport (such as, separate kiosks for medical tourists for immigration clearance, language interpreters, ambulance services at airport etc.).

6.5.5 Policy recommendations

- i. Significantly simplify medical visa regime to match that of other competitors:
 - Consider provision of visa exemptions to nationals of focus countries (esp. other South Asian countries) traveling to India for medical purposes (*conducted successfully in Thailand*).
 - Cost of Medical Visas should be rationalised with that of other competing nations along with Visa on arrival for identified countries.
 - Separate facilities at Indian Embassies in potential countries for medical visa clearance for which an SOP may be developed. Such facility shall also provide information on medical travel in India.
 - Reduce paperwork/background check requirements for individuals applying for medical visa; lower visa application cost.
 - Instate facilities of tele-medicine/tele-pathology and multiple entry visas for patients requiring follow-ups. Hospitals/Institutes may be encouraged to create single point contact or efficient online portal for same.

ii. Push for Health Insurance Portability of social security entitlements across countries:

- Encourage Government alliance/MoUs for enlisting Indian Hospitals for treatment of patient under social security schemes of countries for its citizens and for increasing Medical Value Tourism. For these smooth cross border payment arrangements need to be put in place.
- Domestic Health Insurance regulatory issues impeding foreign patients like lack of cross-check mechanism/control on healthcare providers etc. discouraging foreign insurance companies should be resolved.

iii. As part of Make in India campaign, create a Medical Tourism Campaign:

- Conduct road shows in focus countries to create awareness and build on India's brand as a medical value destination – consider establishing a niche medical offering as Thailand has done.
- Engage in digital and online media advertising to emphasize MVT offerings.
- Develop travel councils with representatives from hospitals, ministry of tourism, etc. to establish network effects and emphasize strength of MVT in India.
- Actively promote India's image as an ideal destination for assisted reproduction/IVF.
- Alternative medicines under AYUSH may be aggressively advertised in developed countries burdened with collateral damage of development.

iv. Fast-track the development of the national medical tourism policy.

v. Better accreditation of facilitators, translators etc.:

- Accredit translators and other medical facilitators to prevent those seeking treatment from being scammed.
 - The Government already has a website (www.indiahealthcaretourism.com) where it publishes a list of accredited medical and wellness service providers – it could make a list of accredited translators and other middle men available on the same website (perhaps with the additional feature of user rating).
- In order to ensure a consistent and positive experience for MVT patients, it is important that complaints arising out of negligence, incapability etc. of the service providers (facilitators, hospitals, agents etc.) or crimes like cheating, theft etc., should be timely resolved. Currently, there is limited awareness around existing legal recourse available to MVT patients or their families in case of sub-standard service delivery.

vi. Simplify the licensing process for IVF clinics.

vii. Promote Dental Tourism:

- A coordinated nationwide strategy to encourage this branch of MVT should be fleshed out. At present, most of the initiatives are at an individual level. Most of the establishments are small dental clinics which have 1-2 dental chairs. This needs scaling up.
- Unlike hospitals, there are no standards prescribed for dental clinics by NABH. There is an immediate need for the same to be developed, adopted and publicized.

viii. Amend of Acts regulating health-related professional services (dental, medical and nursing):

- Amend the Indian Citizenship requirement in the Dentists Act, 1948 and the Medical Council of India Act, 1956: Provisions of the Dentists Act, 1948 and the Medical Council of India Act, 1956 require that only citizens of India having the prescribed qualification as per the Act can register and practice these professions in India. Foreign nationals with requisite qualification can apply for temporary license for limited purposes such as teaching, training or research. The Indian citizenship provisions in the Dentists Act and Medical Council of India Act are an obstacle in concluding Mutual Recognition Agreements (MRAs) in these professions as MRAs can only be concluded on the basis of reciprocity. In other words, unless we are prepared to give access to foreign professionals in India, our professionals will also not be able to get access in those foreign countries. This is one of the most important reasons why we have not been able to conclude MRAs with our FTA partners like Japan, Korea, Singapore, etc. and other developed countries. Though MRAs are for reciprocal access, given the wage differentials and demographic profile of India and our FTA partners, it is expected that Indian professionals are more likely to benefit from these MRAs.

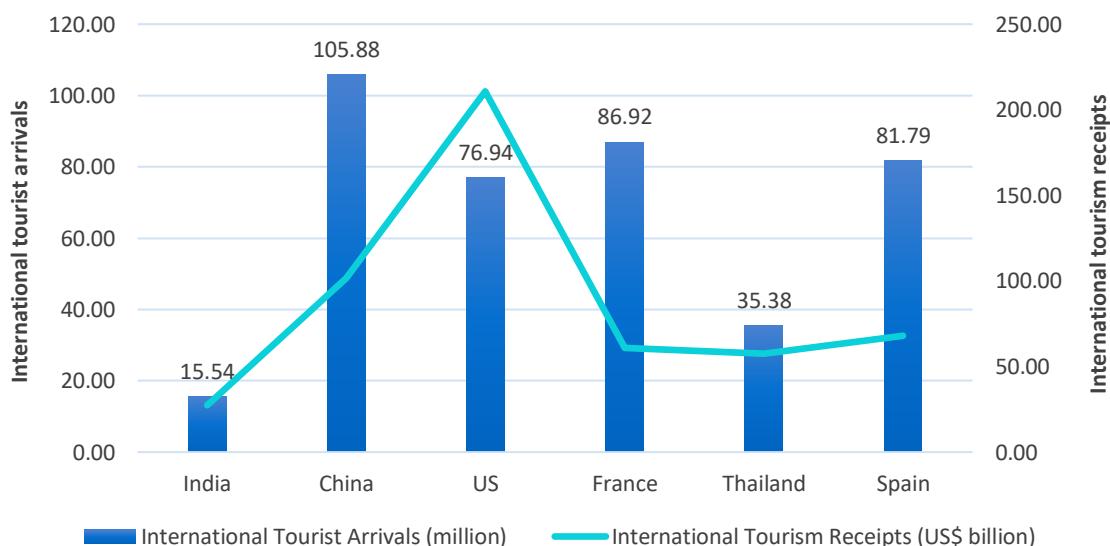
6.6 Tourism and Hospitality Services

India seriously lags behind other developing countries of similar or lower tourism potential in foreign tourist arrivals. Tourism is a service industry with significant job creating potential at multiple skilling levels, both directly in tourism and in other allied supply chain industries. Its foreign exchange earning potential needs to be given prominence, with policies and programs shaped to double or treble tourist arrivals in the next five years. Reforms to enhance the personal security of tourists, upgrade tourism infrastructure, lower tax rates, build business operational and hospitality skills in rural areas, and improve the research base in analysing tourism data are called for.

6.6.1 Global Industry Overview and India's Relative Performance

- i. Per industry estimates, the Tourism and Hospitality sector accounted for 10.4% of global GDP and 9.9% of total employment (313 million jobs), in 2017.
- ii. International tourist arrivals grew 7% in 2017, the highest increase since the 2009 global economic crisis.
 - Growth was fuelled by the global economic upswing and robust consumer spending, resulting in strong outbound demand from virtually all source markets.
- iii. As a worldwide export category, tourism ranks third after chemicals and fuels and ahead of automotive products. In many developing countries, tourism is the top export category. Total exports from international tourism reach USD 1.6 trillion, or USD 4 billion a day on average.
- iv. In 2017, South Asia witnessed a 6% YoY growth in foreign tourist arrivals, and 3% YoY growth in tourism receipts. Positive results in South Asia were largely driven by the strong performance of India, the sub-region's largest destination, which benefited from increasing demand from Western source markets and simpler visa procedures.

Fig. 6.4: International Tourism Trends, 2017



- v. The total contribution of Tourism and Hospitality to India's GDP in 2017 is estimated to be USD 234 billion, 9.4% of GDP.
 - It is forecast to rise by 6.9% pa to INR 32,053.3bn by 2028 (9.9% of GDP).
- vi. The total contribution to employment (including wider effects from investment, the supply chain and induced income impacts) was 41,622,500 jobs in 2017 (8.0% of total employment).
 - By 2028, the industry forecast is expected to support 52,279,000 jobs (8.4% of total employment), an increase of 2.0% pa over the period.

vii. 58.5% growth in Foreign Tourist Arrivals on e-Tourist Visa in January 2018 over January, 2017.

Fig. 6.5: Growth in Foreign Tourist Arrivals on e-Tourist Visa

INDIA	2017 USDbn ¹	2017 % of total	2018 Growth ²	USDbn ¹	2028 % of total	Growth ³
Direct contribution to GDP	91.3	3.7	7.6	194.7	3.9	7.1
Total contribution to GDP	234.0	9.4	7.5	492.2	9.9	6.9
Direct contribution to employment ⁴	26,148	5.0	2.8	33,195	5.3	2.1
Total contribution to employment ⁴	41,623	8.0	3.1	52,279	8.4	2.0
Visitor exports	27.3	5.8	8.8	50.9	5.1	5.5
Domestic spending	186.0	7.5	7.3	405.8	8.1	7.4
Leisure spending	201.7	3.5	7.6	432.3	3.7	7.1
Business spending	11.6	0.2	6.7	24.4	0.2	7.0
Capital investment	41.6	6.3	6.7	85.2	6.1	6.7

¹2017 constant prices & exchange rates; ²2018 real growth adjusted for inflation (%); ³2018-2028 annualised real growth adjusted for inflation (%); ⁴000 jobs

viii. Foreign Exchange Earnings (FEEs) during the period 2017 were USD 27.31 billion with a growth of 20.8% YoY:

- During January-July 2018 FEEs from tourism increased 12.1% YoY to USD 17.09 billion.
- By 2025, the industry is expected to generate USD 109.62 billion of FEEs.

ix. During the period April 2000-June 2018, the sector attracted around USD 11.39 billion of FDI.

Fig.6.6: Share of India in ITRs

Share of India in International Tourism Receipts (ITRs) in World and Asia & the Pacific Region, 2000 - 2017

Year	International Tourism Receipt (in US \$ billion)		FEEs in India (in US \$ billion)	Percentage (%) share and rank of India in World		Percentage (%) share and rank of India in Asia and the Pacific	
	World	Asia and the Pacific		% Share	Rank	% Share	Rank
2000	475.3	85.3	3.460	0.73	36 th	4.06	10 th
2001	463.8	88.1	3.198	0.69	36 th	3.63	12 th
2002	481.9	96.5	3.103	0.64	37 th	3.22	13 th
2003	529.3	93.7	4.463	0.84	37 th	4.76	9 th
2004	633.2	124.1	6.170	0.97	26 th	4.97	8 th
2005	679.6	135.0	7.493	1.10	22 nd	5.55	7 th
2006	744.0	156.9	8.634	1.16	22 nd	5.50	7 th
2007	857.0	187.0	10.729	1.25	22 nd	5.74	6 th
2008	939.0	208.6	11.832	1.26	22 nd	5.67	6 th
2009	853.0	204.2	11.136	1.31	20 th	5.45	7 th
2010	931.0	255.3	14.490	1.56	17 th	5.68	7 th
2011	1042.0	289.4	17.707	1.70	18 th	6.19	8 th
2012	1117.0	329.4	17.971	1.61	16 th	5.46	7 th
2013	1198.0	360.2	18.397	1.54	16 th	5.11	8 th
2014	1252.0	359.0	19.700	1.57	15 th	5.49	7 th
2015	1217.0	355.6	21.013	1.73	14 th	5.91	7 th
2016	1239.0	370.8	22.923	1.85	13 th	6.18	7 th
2017	1332.0	389.5	27.310	2.05	13 th	7.01	7 th

Source: UNWTO Tourism Market Trends 2007, UNWTO Barometer June 2009, April 2014, August 2015, May 2016, July 2017, June 2018 and UNWTO Tourism Highlights 2011, 2012.

6.6.2 Global Best Practices

i. Thailand

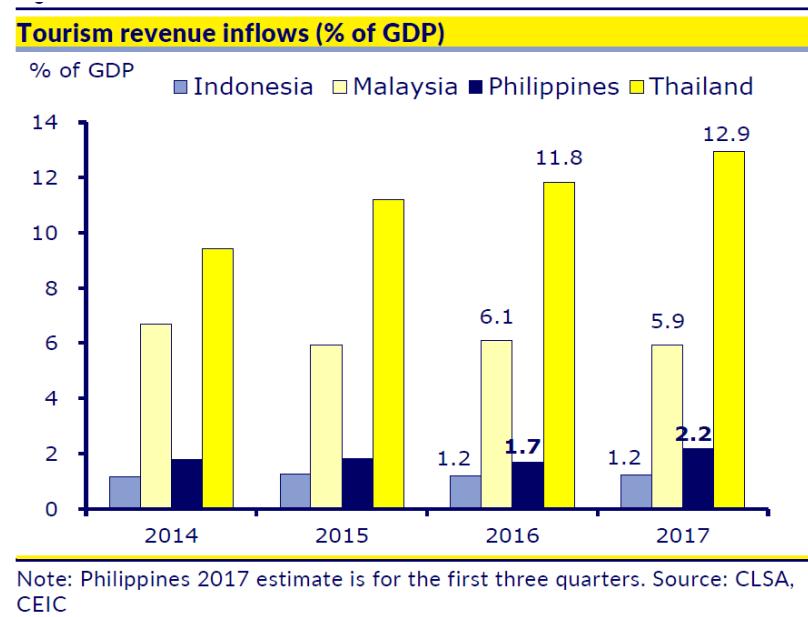
• Addressing infrastructure bottlenecks

- Officials at the Ministry of Tourism and Sports (MoTS) are officially targeting a near doubling of overseas visitors to 68 million arrivals within the next decade, an increase that would put huge burdens on the current infrastructure.
- One of the most high-profile challenges has been the huge waiting lines at Bangkok's major airports, Suvarnabhumi Airport (SA) and Don Mueang International Airport (DMIA), which saw new arrivals in the country waiting for up to five hours to pass through immigration in 2017. That same year, both SA and DMIA were running at 40% beyond capacity to keep up with foreign arrivals. In response, officials have said they plan to upgrade both airports - building new terminals, facilities and another runway so the capital city can handle the 130 million passengers it receives per year.

- Thailand is also building a high-speed rail that will link its 3 major airports, and help reduce logistics cost.
- The USD 45 Eastern Economic Corridor (EEC) is expected to expand access to regions such as Chiang Mai in the north, Nong Khai in the northeast, and Hua Hin in the south.

- **Diversification of location offerings**
 - To counter overcrowding, the government is taking measures to market secondary cities to visitors. One such initiative is the Thailand Riviera project. Approved in March 2018, the project aims to develop 528 km of coastline, including 25 beaches, 10 bays and 25 islands, in the western coastal provinces of Phetchaburi, Prachuap Khiri Khan, Chumphon and Ranong. Major policy goals associated with the project involve distributing tourism revenues to locals, improving regional transport links, and developing facilities and services to attract visitors.
 - Officials have also proposed a BT1.8 billion (USD 52.1 million) four-year project in the four provinces of Samut Songkhram, Samut Sakhon, Prachuap Khiri Khan and Phetchaburi in the central plains region, involving the development of the agricultural, industrial, food and tourism sectors. There are also plans to advertise tourism destinations in the country's south, away from the most popular and crowded areas.
 - Another initiative introduced by the government is aimed at encouraging domestic tourists to travel to 55 select secondary provinces, which receive less tourism-related income than the rest of the country. Introduced in 2018, the "Go Local" campaign offers domestic travellers a tax deduction of up to BT 15,000 (USD 430) on food and accommodation-related expenditures in these targeted provinces.
- **Actively promoting Thailand as an LGBT-friendly destination**
 - It is estimated that tourism revenue from the LGBT community contributes 1.15% to Thailand's economy, a greater share than any other destination.
 - In 2019, Thailand's Tourism Authority plans to host a LGBT travel symposium. At a tourism event in Madrid in January, the industry had a booth for the first time promoting the country specifically to gay and lesbian travelers.

Fig. 6.7: Tourism revenue inflows (% of GDP)



ii. Malaysia

- **Efforts to attract Chinese tourists**

- In July Tourism Malaysia signed a memorandum of understanding (MoU) with Chinese e-commerce platform Alibaba. The partnership allows Chinese consumers to access Malaysian tourism products and services promoted and sold through the Alibaba website. Among the offerings made available through the agreement are local tour and hotel packages – with and without flights – mobile vouchers for dining and shopping, tickets to local attractions and events, as well as local transportation and communication services.

- **Tourism Development Fund**

- The Tourism Development Infrastructure Fund, which was introduced on January 1, 2014, for instance, aims to provide financing for new and existing projects or provide for up to 40% of land acquisition or the total costs of the project, whichever is lower. The loans have a maximum tenure of 20 years, and applicant companies must have a minimum paid-up capital of RM 5 million (USD 1.2 million) and be 51% Malaysian-owned. More stringent guidelines are also being developed and introduced for niche products.

- **Promoting Malaysia as a Shopping Destination**

- Shopping remains a crucial part of Malaysia's tourism story, with the government offsetting the April 2015 introduction of the goods and services tax with a tourist refund policy. The decline in the ringgit's value also makes the country a good-value shopping destination. Klang Valley (KL) was the third-most-visited city in the Asia-Pacific region in 2015, according to the MasterCard

Global Destination Cities Index. Some 1.23 million visitors to KL came from (or through) Singapore, spending USD 1.29 billion, according to the index. Overnight international visitor to the city rose 5.6% between 2014 and 2015, the second-fastest rate in the region, to USD 12 million.

- Some 17 million sq. feet of retail space is expected to open in KL and its surroundings – by 2019, according to local press reports. According to property management company Khong & Jaafar, KL already has an average 7.5 sq. feet of retail space per person, higher than Bangkok and Singapore.

iii. Cambodia

- **Active development of airports and resorts that cater to international tourists**
 - Cambodia’s “open sky” policy has attracted considerable investment in international travel and tourism. The airport in the southern coastal town of Sihanoukville was recently expanded and upgraded to accommodate larger aircraft for Chinese visitors, and the government has approved many resort development projects by international and Cambodian developers for the country’s islands, southern coastline, and mountain areas.
 - Costing close to USD 1 billion and located on a 750 hectare property, a new international airport in Siem Reap province started in March 2018. In January 2018, the government approved the construction of a new airport outside of Phnom Penh with a cost of around USD 1.5 billion.
- **Prioritizing Tourism in National Plans**
 - At the national level, Cambodia has formulated the Tourism Development Strategic Plan 2012–2020. Promoting the “Cambodia: Kingdom of Wonder” and “Clean City, Clean Resort, Good Service” campaigns is one of its objectives.
 - To take advantage of regional integration, the national strategy also is envisaged to endorse ASEAN tourism agreements, especially visa exemption agreements between Cambodia and ASEAN.
 - The China Ready initiative represents Cambodia’s effort to capitalize on the rapid growth in Chinese inbound tourism. The five-year initiative targets 2 million Chinese tourists per year by 2020 (~1/3rd of the total projected 7.5 million visitors by 2020). The initiative seeks to facilitate visits by Chinese tourists, such as providing Chinese signage and documents for visa processing, encouraging local use of the Chinese yuan, and ensuring that food and accommodation facilities are suited to Chinese tastes.

6.6.3 Potential for India

- i. The Government of India is working to achieve 1% share in world's international tourist arrivals by 2020 and 2% share by 2025. GOI should set up a target on the number of visitors it wants to attract and make adequate budgetary allocations.
- ii. Under Budget 2018-19, the government has allotted INR 1,250 crore (USD 183.89 million) for Integrated development of tourist circuits under Swadesh Darshan and Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive (PRASHAD).
- iii. The Ministry of Urban Development has launched an ambitious INR 500 crore HRIDAY scheme in 12 cities across the country (Ajmer, Amravati, Amritsar, Wranger, Varanasi, Mathura, Gaya, Dwarka and Puri) with the aim of preserving and rejuvenating the rich cultural heritage of the country. The scheme will be dovetailed with the PRASHAD scheme.
- iv. Ministry of Tourism has recently launched the 'Adopt A Heritage' project. Heritage sites are being offered for adoption by the public sector, private sector and individuals to become 'Monument Mitras' for developing amenities and facilities at these sites under this programme.
- v. Creation of 'Special Tourism Zones' anchored on Special Purpose Vehicles (SPVs) in partnership with the States was announced in the Budget for 2017- 18. Ministry of Tourism has formulated the guidelines for implementation of the new scheme in consultation with the State Governments and Private Sector and is in the process of completing other formalities before launching the scheme.
- vi. As on December, 2017, e-Visa facility had been extended to the nationals of 163 countries under 3 sub – categories i.e. 'e- Tourist Visa', 'e – Business Visa' and 'e – Medical Visa'.
 - During 2017, a total of 1.7 million foreign tourists arrived on e-Tourist visa registering a growth of 57.2%.

Table 6.5: Top 10 Source Countries for Foreign Tourist Arrivals in India (2017)

Top 10 Source Countries for Foreign Tourist Arrivals in India (2017)		
Rank	Country	Percentage Share
1	Bangladesh	21.49
2	United States	13.72
3	United Kingdom	9.83
4	Canada	3.34
5	Australia	3.23
6	Malaysia	3.21
7	Sri Lanka	3.03
8	Russian Federation	2.78
9	Germany	2.68
10	France	2.49

Source: Bureau of Immigration, Government of India

vii. India is now one of the fastest growing outbound tourism markets in the world, second only to China. The United Nations World Tourism Organization (UNWTO) estimates that India will account for 50 million outbound tourists by 2020:

- Despite the slowdown due to rupee fluctuations, the Indian outbound numbers have been growing at a CAGR of 10-12% over the last 7 years.
- A growing, consumption-driven economy, a large and increasingly affluent middle class, and the ongoing liberalization of air transportation have contributed significantly to this growth in international outbound travel.
- Indian spending outside the country while traveling abroad has doubled in the past 10 years, from USD 7.5 billion in 2005 to nearly USD 16 billion in 2015.

viii. Bain & Company estimates that with a growth in international arrivals to 20 million in India, the upside opportunity would be USD 19.9 billion in incremental tourism receipts from international travelers and the creation of approximately 1 million additional jobs

ix. India is one of the fastest-growing aviation markets in the world: International Air Transport Association India expects India to be the third largest air transport market (behind the US and China) in the world by 2026 (up from its current 7th place ranking):

- After adjusting for inflation, average domestic fares fell by more than 70% since 2005.
- Low cost operators account for about 25% of international capacity.
- India is directly linked to 304 international destinations, up from 230 in 2008.
- About 41% of India's direct international connectivity is to the Middle East—much of it to super-connector hubs of UAE and Qatar.

- x. The impact tourism (rural tourism, ecotourism etc.) model could contribute USD 25 billion, catering to 15 million tourists, and in turn create 100,000 village-level entrepreneurs.
- xi. **World Travel and Tourism Council (WTTC) research forecasts that between 2016 and 2026, the 10 fastest growing destinations for leisure-travel spending will be India, followed by Angola, Uganda, Brunei, Thailand, China, Myanmar, Oman, Mozambique and Viet Nam.**
- xii. Per WEF's Tourism and Travel Competitiveness Ranking (2017), India has been ranked:
 - 40th on the Overall Tourism and Travel Competitiveness
 - 10th in Price Competitiveness
 - 9th in Cultural Resources and Business Travel
 - 32nd in Air Transport Infrastructure
 - 29th in Ground and Port Infrastructure

Table 6.6: Most Improved Countries in the Travel & Tourism Competitiveness Index (WEF, 2017)

Most Improved Countries in the Travel & Tourism Competitiveness Index (WEF, 2017)					
Country	Global 2017	Rank	Change in Performance since 2015	Score (%)	Change in rank since 2015
Azerbaijan	71	5.98			+13
Tajikistan	107	5.01			+12
India	40	3.86			+12
Israel	61	4.79			+11
Korea, Rep.	19	4.33			+10
Egypt	74	4.32			+9
Bhutan	78	4.52			+9
Viet Nam	67	4.80			+8
Albania	98	3.81			+8
Mexico	22	3.86			+8
Peru	51	3.93			+7
Chad	135	3.83			+6
Gabon	119	4.47			+5
Algeria	118	4.68			+5
Japan	4	6.18			+5

6.6.4 Challenges

Improving the traveler's experience in India requires significant infrastructure investment. Despite India's considerable current investment, **an estimated USD 1.5 trillion in infrastructure investment will be required over the coming decade to bridge the current deficit.**

i. **Inadequate ground infrastructure and last-mile connectivity problems**

- Despite the improvement in roads, connectivity issues, particularly for foreign tourists, persist as a result of dense traffic and a wide range of vehicles on the thoroughfares, including trucks, cars, rickshaws (and even cattle). In comparison, tourists find getting around in China easier, faster, safer and in general easier than in India, whether by air, rail or road.

ii. **Capacity building**

- Talent management is a major challenge for the sector. Inadequate supply of quality talent and increased competition for talent within the sector and from competing service sectors (such as BPOs, retail, airlines etc) has made attrition a significant issue for the industry.
- CEOs believe that there should be a considerable push towards setting up more *quality* institutes supplying talent to the hospitality sector.
 - In a report published in the Mint in 2012, Patu Keswani (Chairman and MD of Lemon Tree Hotels Pvt Ltd) was quoted: “Most of the guys we hire from hotel management institutes are unemployable. We provide in-house training... There’s always a cost attached to it”.
 - According to the same report, in 2012 there were only 52,000 trained people available against the hospitality industry’s need for 583,000 professionals.

iii. **Safety issues**

- The (perceived) lack of personal safety has caused concern with regard to sanitation, transportation and violence (especially among women).
- The WEF in its latest Travel and Tourism Report (2017) ranks India 114th (out of 136 countries) in terms of safety and security.

iv. **Boarding Costs**

- The rising land prices in India and the high financing costs have resulted in high room tariffs and long gestation periods for achieving break even.
- Rooms that cost USD 400 a night in Delhi would cost close to USD 100 in China. While such organizations as Oyo Rooms and Airbnb have stepped in to help fill a void, more needs to be done to bridge the gap.
- As a result of the GST, India now has some of the highest tax rates in the Asia-Pacific region.

Table 6.7: Comparative Tax Rates in Asia Pacific

Comparative Tax Rates in Asia Pacific		
Country	Rooms (%)	Food and Beverage (%)
India	28/18/12	18
Australia	10	10
Singapore	7	7
Thailand	7	7
Indonesia/Bali	10	10
China	6	6
Malaysia	6	6
Viet Nam	10	10

Source: World Economic Forum

6.6.5 Policy Recommendations

i. Create a pan-India Tourism Board

- India has more than 50 active foreign tourism boards, but not its own tourism board. While there exist a number of industry associations and state-level bodies, **no public-private organization represents the industry, and these bodies work in silos to drive forward their own agenda.**
- The industry is fragmented and **hindered by poor coordination between the state and central government as well as within the central government itself**. No single ministry is responsible for all the policies affecting the aviation, travel and tourism industry -- the ministries of Civil Aviation, Tourism, Home Affairs, Culture, and Road Transport and Highways, among others, have all been actively involved in the industry's policies.
- A sovereign tourism board would help create a (much needed) synergy between different industry associations as well as different levels of government.

Table 6.8: Tourism Board, Composition and Funding around the World

Tourism Board, Composition and Funding around the World			
Economy	Composition	Number of Members	Funding
Australia	Government (2) Industry Leaders (4) Business Leaders (3)	Board: 9 Staff: 220	USD 117 million, including other income
Hong Kong SAR	Government (2) Industry Bodies (2) Industry Leaders (8) Business Leaders	Board: 20 Staff: 377	USD 110 million; 90% from government
Malta	Government Industry Leaders Business Leaders	Board: 12	Government Funded
New Zealand	Government (1) Industry Bodies (1) Industry Leaders Business Leaders	Board: 9 Staff: 150	USD 88 million; 94% from government
Singapore	Government (3) Academia (1) Industry Leaders (2) Business Leaders (6)	Board: 12	USD 153 million
Spain	Government Industry Bodies Industry Leaders Business Leaders	Board: 6	USD 110 million; 83% from government
United States	Government (4) Industry Leaders (5) Business Leaders (1) Academia (1)	Board: 11	USD 133 million; 57% government, 39% private sector

Source: Bain and Company Analysis (2017)

- Tourism Boards, across the countries listed above, perform numerous tasks – tourism promotion, quality accreditation, capacity development, policy development, industry collaboration, market research, etc.

ii. **Development of Tourism Research Wings at the Centre and State level**

- Tourism data analysis is critical for tourism planning. Hence there is imperative to establish tourism research wings at state and central level for conducting tourism studies, identifying issues, forecasting tourists and planning for tourist infrastructure etc. NCAER currently is the only agency that produces tourism satellite national income accounts for the Government of India.

iii. **Identify gaps in tourism infrastructure**

- Third party National Tourism Infrastructure Gap Assessment can be conducted to identify major scope of improvement at various tourist destinations and cities. This can help in prioritizing investment on tourism infrastructure.

iv. **Accord infrastructure status to tourism infrastructure and amend tax rates**

- The recognition of the hospitality sector with an 'infrastructure status' has been a long pending demand. This recognition will facilitate availing loans at lower interest rates, extend other fiscal benefits under the Income-tax Act, 1961 and ease the utility of ECB regulations.
- The Federation of Hotels & Restaurants Association of India (FHRAI) has sought infrastructure status from the government for projects worth INR 25 crore (to enable inclusion of 2-3 star hotel categories) and above (as against the current criteria of INR 200 crore).
- The FHRAI has also asked for a flat tax rate of 12% on all the categories of hotels to encourage tourism-induced employment in the country.
- GST Rates for tourism sector activities like restaurant, hotels etc. may be rationalized considering the tax rates and system of other competing market countries.
- Special incentives in terms of tax etc. may be provided to tour operators operating in emerging markets.

v. **Make access to Indian tourist visa even faster and cheaper**

vi. **Building business operations and hospitality skills in rural areas**

This will promote sustainable development, scale up practices in line with the Sustainable Development Goals, and create rural job opportunities. In Kerala, the Alleppey Tourism Development Cooperative Society facilitated the creation of the first tourism cooperative focusing on houseboats. Similar models could be adapted to different cultural and geographical contexts.

vii. **Upgrading tourism infrastructure on a continuous basis**

Tourist amenities available at various destinations need to be improved. These include basic amenities such as drinking water, well maintained and clean waiting rooms and toilets, first aid and wayside amenities such as lounges, cafeterias, motels, and parking facilities, among others.

viii. **Invest in 2-3 major tourism hubs**

ix. **Buddhist Tourism:** India has large potential for **Buddhist religious tourism**. Special programs may be designed for aggressive and innovative advertising of our tourist spots through movies/social media/televisions etc. in target countries. Infrastructure development like tented accommodation, stress on cleanliness, connectivity etc. may also be taken on priority for spots of Buddhist importance.

x. **Attracting Chinese Tourists**

- **Getting Chinese tourists to visit India:** China has the largest number of outbound tourists and these tourists are top spenders in international tourism. (In 2017, Chinese tourists made more than 130 million outbound trips and spent USD 258 billion on international travel according to World Tourism Organization.).
- **Actions with special focus on countries** like China (Buddhist tourism/Film tourism etc.) which have large share in outbound international tourist but are not a significant source for India.
- Get India recognized as a destination recommended by Chinese Government for outbound tourism.
- **Introduce visa free transit services** in cities in India on the lines of efforts taken by China in this regard.

xi. **Undertake Country Brand Strategy Rating**

- Subscribe to Digital Demand tool (D2) to gain access to cluster of touristic searches as it gives insights on the popularity of a tourist destination, what tourists are searching for at a particular destination, seasonality trend and target market. This tool would facilitate as a surveillance system in continuously measuring the impact of marketing campaign. The client list of this tool consists of national tourism organizations of Sweden, Portugal, Germany, Finland, Costa Rica, Norway, European Travel Commission etc.

07

Fund Management, Round Tripping and Elephant Bonds



7. Fund Management, Round Tripping and Elephant Bonds

7.1 Background

India is currently a net importer of financial services, running a small trade deficit of – USD 373 million as of 2017-18. Financial services exports have averaged USD 5.2 billion in recent years and their share in overall services exports has declined from 5.2% in 2010-11 to 2.6% in 2017-18. Despite India's lead and performance in services, financial services exports are at a mere \$ 5 billion or 0.2% of GDP.

The financial services sector has been identified as one of the Champion Services Sectors by the government for import substitution of financial services for which India currently relies on global financial centres, and to boost financial services exports and high-skilled employment. Yet, financial services exports have largely been ignored in India, with stringent regulations and controls due to concerns around round tripping leading to missed opportunities for rendering financial services to foreign asset management firms, foreign individuals, etc. However, round tripping concerns have been addressed through rules targeting overseas direct investments or ODIs. Thus, Foreign Exchange Management Act, 1999 (FEMA), Foreign Exchange Management (Transfer or Issue of any Foreign Security) Regulations, 2004 (ODI Regulations) read with Master Direction on 'Direct Investment by Residents in Joint Venture/ Wholly Owned Subsidiary Abroad', Liberalised Remittance Scheme, notifications issued by RBI from time to time, as well as laws relating to taxation and black money, including the Prevention of Money-Laundering Act, 2002 (PMLA Act) and OECD's Common Reporting Standard, can be used to resolve the problem of round tripping.

There lies immense potential to increase portfolio investment by foreign individuals – foreign nationals and in particular NRIs – into India, and develop the offshore fund management industry.

The SEBI/CBDF regulations dealing with the offshore fund management sector have been unsuccessful in bringing in a turnaround. Despite the CBDF "freeing" the sector, nothing has happened on the ground due to stifling eligibility conditions in Section 9A of the Income Tax Act, 1961 to avail the safe harbour provisions. The 17 eligibility conditions are extremely stringent, open to varied interpretations, incoherent with offshore funds' structure/investment pattern, and impose dual compliance burden. Some of the conditions, such as aggregate participation or investment in an offshore fund by persons Indian residents shall not exceed 5% of the fund corpus, and the fund manager is not an employee or a connected person of the offshore fund, have no place in the open Indian economy and need to be revisited.

7.2 Round Tripping: Recommendations in Relation to Existing Legal Framework

7.2.1 Background

The term 'round tripping' has not been specifically defined nor has the term as a concept been explained under the regulatory framework in India. Some conceptual basis exists in laws governing foreign exchange, taxation and black money. However, the authorities have always raised concerns around arrangements resulting in round tripping of funds. Such arrangements are heavily scrutinized by Indian regulators and there have been instances in past where the regulators have taken appropriate actions over the phenomenon of round tripping.

7.2.2 Current Legal Framework

FEMA:

Overseas direct investments from India are regulated by the provisions of the Foreign Exchange Management Act, 1999 (FEMA), Foreign Exchange Management (Transfer or Issue of any Foreign Security) Regulations, 2004 (ODI Regulations) read with Master Direction on 'Direct Investment by Residents in Joint Venture/ Wholly Owned Subsidiary Abroad' and Liberalised Remittance Scheme and notifications issued by RBI from time to time.

One of the key conditions for an 'Indian Party' to undertake Overseas Direct Investment (ODI) in a Joint Venture (JV) or Wholly Owned Subsidiary (WOS) is that the Overseas JV/ WOS should be engaged in a '***bona fide business activity***'. However, no specific stipulation has been provided by RBI as to what constitutes a *bona fide* business activity, which contributes to the ambiguity.

Moreover, in terms of an RBI notification, Indian companies not allowed to issue any direct / indirect guarantee or create contingent liability or offer any security in any form for such borrowings by their overseas holding / associate / subsidiary group companies – except for purposes explicitly permitted under the relevant regulations. Further, funds raised abroad with the support of Indian companies cannot be used in India unless it conforms to the general or specific permission granted under the relevant regulations.

In fact, the RBI in past has taken also taken a view that Foreign Direct investment (FDI) by an entity which has ODI funding from India is not a *bona fide* business activity in terms of the provisions of ODI Regulations. Accordingly, in such cases, RBI had directed the companies to unwind either FDI or ODI leg of the structure.

Taxation and Black Money Laws

i. Round Tripping:

The Indian income tax law does not define round tripping. The income tax law provides for the concept of “round-trip financing” under the General Anti Avoidance Rules (GAAR) provisions. “Round trip financing” has been defined to include any arrangement in which funds are transferred among parties to the arrangement and such transactions lack any commercial purpose other than obtaining tax benefit. Indian tax law provides that in case of round tripping financing, provisions of GAAR shall be applicable.

ii. Common Reporting Standard:

Indian tax law stipulates automatic exchange of taxpayer's information under the Common Reporting Standard (CRS) with 80 countries. These standards provide for identifying key information regarding taxpayers and sharing such information between foreign jurisdictions and Indian tax authorities. Pursuant to this initiative, foreign jurisdictions have shared substantial information regarding various taxpayers on the basis of which the income tax authorities were able to initiate tax proceedings against taxpayers.

iii. Tax Treaty:

India has recently amended the Double Taxation Avoidance Agreements (DTAA) with Mauritius, Singapore and Cyprus. In the past, the DTAAAs with these jurisdictions provided for beneficial treatment with regards to capital gains arising from sale of shares of a company. These jurisdictions were generally used to route investments to claim tax advantages. The DTAAAs with these jurisdictions have been amended so as to withdraw the beneficial tax treatment and enable India to tax capital gains arising from sale of shares of a company derived by the resident of these foreign jurisdictions. India also introduced the Black Money law with effect from July 01, 2015. Under the Black Money law, any undisclosed foreign income or foreign asset of a taxpayer are liable to be taxed at the rate of 30%. Such income or assets are also liable for penalty at the rate of 3 times the tax amount. The Black Money Act provides for rigorous imprisonment extending from 3 years to 10 years.

7.2.3 Recommendations Under FEMA

The existing legal framework under FEMA does not permit FDI by an overseas JV or WOS of an 'Indian Party' without the prior approval of RBI. The RBI has in the past also raised concerns due to mere presence of such an ODI entity in an FDI structure. This stringent view adopted by the RBI under the objective of preventing 'round tripping' of funds has impacted abilities of certain Indian companies which have made ODI

outside India to attract FDI in India even for their group entities, even for legitimate and *bona fide* business purposes. In this backdrop, it is recommended that the existing restrictions under ODI Regulations be relaxed to allow overseas JV or WOS of an Indian Party to undertake fresh FDI or Indian entities to undertake ODI in a foreign entity which already has existing FDI investment structures in India under the Automatic Route (without prior approval of RBI), subject to fulfillment of certain conditions, which shall ensure that the proposed investment whether ODI or FDI, is being undertaken for *bona fide* business purposes only. Accordingly, it is recommended that the following cases should not be considered as 'round tripping' or in violation of ODI Regulations, subject to conditions herein as stated in the respective cases:

Undertaking ODI in a structure which already has an FDI in India

It is recommended that an Indian party should be allowed to undertake ODI in a structure which already has an existing FDI structure in India provided that:

- i. Total value of existing FDI does not exceed 25% of the consolidated net worth of the foreign entity in which ODI is being made; and
- ii. Any additional FDI should be allowed provided such funds are not directly or indirectly from India.

Undertaking fresh FDI in India by entities where ODI has been made by an Indian Party

There may be certain legitimate scenarios where a foreign JV or WOS of an Indian party wishes to undertake FDI in India for its *bona fide* business purposes. However, currently such foreign JV or WOS is prohibited to undertake FDI in light of the existing restrictions under ODI Regulations. Such blanket prohibition under the garb of 'round tripping' of funds is affecting legitimate business activities. Accordingly, it is recommended that in cases where such foreign JV or WOS is investing money in India through funds which are earned overseas from legitimate and *bona fide* business activities and such funds are invested as FDI in India through proper banking channels, such structures should be permitted under the Automatic Route, subject to fulfillment of the following conditions (which shall ensure investment is *bona fide*):

- i. Total value of FDI shall not be more than 25% of the consolidated net worth of the overseas entity in which ODI has already been undertaken; and
- ii. Net worth of overseas entity should be at least USD 10 million.

Exemption to Overseas listed companies

Companies which are listed overseas in Financial Action Task Force (FATF) jurisdictions (with market capitalization of certain specified thresholds), should be allowed to invest in India, irrespective of its shareholding being held by persons resident in India.

7.2.4 Possible Suggestions Under Taxation and Black Money Laws

The Government may introduce a one-time disclosure scheme for declaring undisclosed foreign income and assets and pay tax on such undisclosed income / asset at the rate of 15%. The scheme should also provide for locking 40% of the funds in Elephant Bonds with a coupon rate linked to LIBOR (LIBOR plus 500-500 basis points) for a period of 20-30 years. A 6% rate, earned on these bonds would be credited to the depositor. The balance funds should be available with the declarant to be utilised in India. The declarant should be required to submit an undertaking that the remaining funds will not be remitted outside India in the future. The scheme should provide all the necessary clarification upfront so as to avoid any ambiguity and confusion. The scheme should also provide immunity from any action under other applicable laws such as FEMA, Securities and Exchange Board of India Act, 1992, Prevention of Money Laundering Act, 2002, etc.). In order to introduce such scheme, necessary amendments would be required to be made under the Black Money Act.

7.3 Attracting foreign individual investment into India

In Feb 2004, Reserve Bank of India (RBI) announced a Liberalized Remittance Scheme (LRS), with the intention of simplifying remittance outside India by resident individuals. Currently, the limit specified under LRS for making remittance outside India by resident individuals is USD 250000 per financial year.

A similar approach can be adopted for participation in Indian capital markets by foreign individuals, provided they come through authorized dealers (i.e. Indian and foreign banks as permitted by RBI) and relevant KYC and PAN requirements are complied with. This can be implemented by SEBI and RBI. This will be in line with Hon'ble Prime Minister's statement at Davos, that India is open for business for all and does not differentiate between any class of investors and is taking one more step towards ease of business. Foreign individuals are also welcome to invest in MSMEs and the relevant ministry along with RBI will draw out the relevant details so that MSME capital availability goes up. This can be a big step forward towards Make in India.

7.3.1 Key Challenges

- i. There is immense potential to increase portfolio investment by foreign individuals – foreign nationals and in particular NRIs – into India. Attracting such foreign individuals to invest in India via the direct route would contribute to further deepening of capital markets and growth of Mutual Funds and AIFs industry.
- ii. Foreign nationals and NRIs can currently invest in Indian capital markets directly and through offshore routes via: 1) Shares and securities; 2) Mutual Funds and Alternative Investment Funds (AIFs); 3) Offshore funds investing in India through FPI route; and 4) Offshore Wealth Managers, Portfolio Managers or Distributors (foreign nationals only).
- iii. Though SEBI has made the market entry process for foreign portfolio investors (such as registration, opening a bank account, completing KYC and getting custodians, tax advisors, brokers, etc.) more efficient overtime, the entry process and operational aspects remain tedious for foreign individual investors due to several regulatory restrictions and onerous tax and compliance requirements. Such high transaction costs discourage foreign individuals from investing directly into India, instead preferring to invest via offshore funds through the FPI route where the regulatory, tax and compliance requirements are undertaken by the offshore funds.
- iv. The regulatory and compliance requirements include:
 - Foreign nationals investing in equities, securities and Mutual Funds are required to invest via the FPI route and register as a Category II FPI.
 - NRIs are permitted to invest directly in securities/shares/Mutual Funds/AIFs as well as via the FPI route. However, aggregate investment by NRIs is capped at 50% of the FPI corpus and investment by a single NRI is capped at 25% of the corpus. This makes it challenging for foreign investment funds to monitor NRI investment in the fund within the prescribed limits and restricts them from raising capital in many jurisdictions with vast NRI population.
 - Though SEBI has simplified the application process and KYC process for FPI investors overtime, the KYC documentation requirements for those investing via Category II FPI remain onerous relative to that for Category I FPI since Category II FPIs (which includes family offices, hedge funds, trusts, endowments, etc.) are considered high-risk investors. Foreign nationals investing in India via Category II FPI route are therefore also subject to the same KYC requirements.
 - FPI investors are also required to obtain a PAN card, which imposes additional paperwork burden on foreign individuals.
 - Providing sensitive personal information for KYC purposes that will be shared with private market intermediaries (Depository Participants, stock brokers, custodians,

etc.) acts as a deterrent for foreign nationals, especially high net-worth investors, amid concerns over data security.

- In addition to the KYC process, foreign individuals are required to provide several documents to open a dematerialized account (which is required to invest and transact in securities, shares, Mutual Funds), with additional document requirements for foreign nationals.
- Foreign individuals are required to file tax returns, which increases tax compliance burden for those investing in AIFs and Mutual Funds, especially since AIFs and Mutual Funds already withhold taxes before distributing investment income to foreign investors.

v. Foreign individuals can invest in AIFs via the FPI route where current income tax laws do not provide tax pass-through or any guidance on the tax treatment of investment income. Due to this, investors are taxed based on complex private trust taxation principles since AIFs are usually set up under the trust structure.

vi. SEBI's rigorous compliance regime and restrictions on investment routes for foreign nationals and NRIs are due to the risk perception about foreign individuals and Category II FPI investors in general (which are considered less-regulated, high-risk investors) and concerns related to round-tripping and money laundering of funds into India by resident Indians/persons of Indian origin via offshore jurisdictions.

7.3.2 Global Best Practices

Countries such as the US, UK and Singapore have a much more favourable tax and regulatory regime with minimal compliance requirements for foreign individual investors, including:

- i. Minimal restrictions on investing in equities and securities
- ii. No FPI-equivalent local registration requirements
- iii. Permit global KYC norms (with additional verification conducted if required)
- iv. No tax on capital gains
- v. No tax compliance requirements, including filing of tax returns

7.3.3 Policy Recommendations

This issue has been addressed as a part of the recommendations for foreign institutional investors in the next section.

7.4 Offshore Fund Management

7.4.1 Offshore Fund Management as a Boost to Financial Services Sector

India is currently a net importer of financial services, running a small trade deficit of – USD 373 million as of 2017-18. Financial services exports have averaged about USD 5.2 billion in the recent years, while their share in total services exports has declined from 5.2% in 2010-11 to 2.6% in 2017-18. The financial services sector has been identified as one of the Champion Services Sectors by the government for import substitution of financial services for which India currently relies on global financial centres, and to boost financial services exports and high-skilled employment.

- i. One area in financial services with scope for continued expansion is the asset management industry. India has one of the fastest growing asset management industry in the world, with Assets Under Management (AUM) in the Mutual Funds industry more than doubling between 2013-17, AUM in Portfolio Management Services rising three-folds and AUM in Alternative Investment Funds (AIFs) increasing ten-folds (**Table 7.1**). However, India still accounts for less than 1% of the global asset management industry.
- ii. One area within the asset management industry with immense potential for development is undertaking fund management activity of the offshore funds from India. These offshore funds are located in tax and regulatory friendly jurisdictions, such as Singapore, Mauritius, Luxembourg, Ireland, Hong Kong and London, and pool and manage foreign portfolio investments (FPIs) coming into India. Such funds include the India-dedicated offshore funds which invest only in India (with USD 31 billion in AUM as of 2017, **Table 7.1**) and the Regional/Global diversified funds which have partial investment allocation to India. Such funds are currently managed by fund managers, often of Indian origin, from these offshore jurisdictions since their presence in India can create tax implications for the offshore fund's profits.

Addressing the tax implications for such offshore funds would incentivise the fund managers of India-dedicated funds, and potentially, Regional/Global diversified funds with partial investment allocation to India to relocate from offshore jurisdictions to

India to manage these funds. It would also enable greater delegation of fund management activity of FPIs to India as India continues to attract FPI inflows in the coming years (**Table 7.1**). In addition, it would enable Portfolio Managers currently located in India, and managing domestic funds, to expand their client base to manage the offshore funds from India (Note: SEBI already permits Portfolio Managers to manage offshore funds under **SEBI (Portfolio Managers) Regulations (1993)**). Such on-shoring of fund management activity of offshore funds would yield several benefits to the economy including:

Table 7.1: Domestic Fund Management Industry and Offshore Funds Investing in India

Domestic Fund Management Industry	2012	2013	2014	2015	2016	2017	2020f	2025f
AUM for Mutual Funds (USD billion)	144	142	175	202	249	350		
Number of Mutual Funds	44	43	46	43	42	40		
AUM for Alternative Investment Funds (AIFs) (USD billion)		2	3	5	10	22		
Number of AIFs		42	101	135	209	303		
AUM for Portfolio Management Services (ex-EPFO) (USD billion)	12	12	17	20	25	39		
Number of Portfolio Managers	250	332	193	221	236	255		
AUM for Unit Linked Insurance Plans (USD billion)	68	55	52	55	50	59		
Number of Fund Managers	24	24	24	24	24	24		
Offshore Funds								
AUM for India-Dedicated Offshore Funds (USD billion)	21	17	23	24	22	31		
Number of India-Dedicated Offshore Funds	48	54	63	68	79	85		
Potential Onshore Management of Offshore Funds								
AUM if India-Dedicated Offshore Funds Managed from India (USD billion)							40^	70^
AUM if one-fourth of FPI Managed from India (USD billion)							142*	248*
^Industry projections assuming reform in Section 9A lead to on-shoring of fund management activity of India-dedicated offshore funds to India.								
*Industry projections assuming reform in Section 9A lead to on-shoring of fund management activity of one-fourth of FPI's total AUM to India, including India-dedicated offshore funds and regional/global diversified funds with partial investment allocation to India.								

Source: NSDL, Morningstar, SEBI, AMFI, IRDA, industry sources.

- Creation of an asset management hub in India via employment generation for about 7,500 high-skilled finance professionals, including fund managers and support service providers, such as custodians, fund specialists, fund accountants, fund administrators, risk managers, research analytics professionals and tax advisors.

- The management fee received by fund managers for managing the offshore funds could yield financial services export revenues of about USD 800 million by 2020 and USD 1.4 billion by 2025 if the India-dedicated offshore funds move their fund management activity to India, and about USD 2.8 billion by 2020 and USD 5.0 billion by 2025 if in addition, several Regional/Global diversified funds with partial investment allocation to India move their fund management activity to India such that one-fourth of FPI's total AUM are managed from India.
- The fund managers' remuneration would yield income tax revenues of about INR 1,680 crores by 2020 and INR 2,940 crores by 2025 if the India-dedicated offshore funds move their fund management activity to India, and about INR 5,964 crores by 2020 and INR 10,416 crores by 2025 if in addition, several Regional/Global diversified funds with partial investment allocation to India move their fund management activity to India such that one-fourth of FPI's total AUM are managed from India.

iii. The Gujarat GIFT City has been established as a Multi-Services SEZ and an International Financial Services Centre (IFSC) to enable the on-shoring of India-related financial services that are currently being rendered from offshore financial centres and to help reduce financial services imports. The IFSC provides a platform to attract and re-domicile the India-dedicated offshore funds (and their fund management activity), including the FPI-led offshore funds and offshore funds set up by domestic investors by raising money overseas, via the Alternative Investment Funds (AIFs) and Mutual Funds route. At least 50 such AIFs with AUM of more than USD 3 billion are expected to be set up in the IFSC over the next 4-5 years. This would yield several benefits to the economy via:

- Creating employment for high-skilled finance professionals, such as fund managers, custodians, fund accountants, fund administrators, etc., and a fund management ecosystem in the IFSC.
- Attracting foreign investment inflows and generating financial services export revenues via the management fees received by Indian fund managers (who would have a 'resident' status) from the AIFs (which would have a 'non-resident' status).
- Generating income tax revenues from the investment income of AIFs and remuneration of fund managers.

7.4.2 Challenges with the Tax Regime for Offshore Funds

To incentivize the offshore fund managers to relocate from offshore jurisdictions to India to manage such funds, with effect from April 2016, the government introduced 'safe harbour' provisions as **Section 9A of the Income Tax Act (1961)**. Under these provisions, on satisfying a set of eligibility conditions, an offshore fund would not be considered a resident for tax purposes solely based on its fund manager being located

in India. During 2016 and 2017, the government also relaxed some of the eligibility conditions for institutional investors (on investor diversification) and fund managers (on fund management activity, remuneration) and expanded the list of jurisdictions where the offshore funds could be located to avail the safe harbour provisions.

The eligibility conditions under safe harbour provisions have been designed to prevent round-tripping and money laundering of funds to India via offshore jurisdictions with which India has a Double Taxation Avoidance Agreement (DTAA), including by resident Indians/persons of Indian origin who are investors/asset managers investing in India via the FPI/offshore funds route. The CBDT's reservations on relaxing the eligibility conditions emanate from concerns around AML/KYC compliance and to curb revenue loss from the potential misuse of safe harbour provisions. While several offshore funds are willing to relocate their fund managers to India, the number of applications being submitted by such funds to CBDT (and being accepted) to avail the safe harbour provisions remain extremely low even three years after the introduction of the provisions. This is because:

- i. The offshore funds have to satisfy a total of 17 eligibility conditions, 13 conditions related to the offshore fund's structure, investor composition and investment activity, and 4 conditions related to the fund manager's activity and remuneration.
- ii. Most offshore funds are unable to satisfy majority of the eligibility conditions since they are extremely stringent, open to varied legal interpretation, and most importantly, the conditions on the offshore fund's structure/investor composition/investment activity and the fund manager's activity/remuneration are incoherent with the intrinsic structure of the offshore funds and the nature of FPI inflows into India.
- iii. The need to satisfy several eligibility conditions results in dual compliance burden for the offshore fund investors since they are also required to comply with SEBI regulations and SEBI/RBI guidelines related to foreign investors and money laundering. While the eligibility conditions under safe harbour provisions have been designed to tackle round-tripping, SEBI and RBI already have alternate regulations and guidelines in place to monitor round-tripping and direct/indirect investment (including by residents) and end-investors in FPIs, with room to deploy additional monitoring tools if necessary. Many of these regulations have also evolved over the years and include: 1) **SEBI (FPI) Regulations (2019)**. In addition, SEBI issued Circulars in 2018 to address the eligibility criteria for NRI/OCI/resident Indian investment in FPIs and identify the Beneficial Owners of FPIs as per the **Prevention of Money-Laundering Rules, 2005 (PMLA Rules)**; 2) SEBI and RBI's guidelines on AML standards and KYC norms as per the **Prevention of Money-Laundering Act, 2002 (PMLA Act)**; and 3) Exchange of investor information

with tax authorities in other jurisdictions under the OECD's **Common Reporting Standard**.

7.4.3 Global Best Practices

In comparison, the eligibility conditions for offshore funds to avail the safe harbour provisions in key fund management jurisdictions, such as the US, UK, Singapore and Hong Kong, tend to be fewer, simpler, relatively easy to comply with and less stringent in many cases, with discretion available to the authorities to evaluate the offshore fund's structure and investment pattern against the eligibility conditions and allow for exceptions on a case-by-case basis.

i. UK

- The offshore fund is exempted from corporation tax if the investment manager is regarded as independent and not a permanent establishment in UK.
- The offshore fund is also exempted from income tax in relation to investment transactions approved under the Investment Manager Exemption, such as stocks, warrants and derivatives, debt instruments, collective investment schemes, etc.
- For the on-shore investment manager: 1) The primary function is investment management; 2) Is entitled to a maximum 20% of taxable profits (tax exemption is restricted if this condition is not met); 3) Remuneration received is at least customary remuneration; 4) Is independent and the relationship between the Investment Manager and non-resident is determined to be independent if (a) the fund is 'widely held', with majority interest held by at most 5 persons and a single person holding at most 20%; or (b) the fund is actively marketed to gather third party investments.
- The provision of services to non-residents must not exceed 70% of the investment management business, with reference to either fees or other appropriate measures.

ii. Hong Kong

- The offshore fund's profit is exempted from tax if trading receipt of the transaction is below 5% of the total trading receipts of specified transactions (securities, futures contracts, FX contracts, deposits, exchange-traded commodities, foreign currencies) and incidental transactions that arise in the process of carrying out a specified transaction.
- The on-shore investment manager must have a Type 9 license under Hong Kong's Securities & Future Ordinance.
- Residents along with their associates cannot directly/indirectly hold more than 30% beneficial interest in the fund.

iii. Singapore

The offshore fund receives tax exemption for Specified Income (excluding interest derived from deposits, qualifying debt securities, distributions made by REITs, etc.) from Designated Investments (stocks, debt securities, REITs & ETFs, overseas real estate, financial derivatives, unit trusts, etc.).

As per the 2007 provisions:

- The on-shore investment manager must be Singapore based with a Capital Markets Services license.
- The fund cannot be 100% owned by Singapore investors.
- The investors need to be a qualifying 'relevant owner': 1) An individual investor; 2) Bona fide non-individual investor without local permanent establishment and not carrying out business in Singapore; 3) Bona fide non-individual investor with permanent establishment locally but not using its operational funds to invest; 4) Any other investor that owns less than 30% (50% if more than 10 investors) of the fund.

As per the 2010 provisions:

- The on-shore investment manager must be Singapore based with a Capital Markets Services license.
- The fund must employ a minimum of 3 Investment Professionals earning more than SGD 3,500/month.
- The offshore fund must incur a minimum of SGD 200,000 of local business expenses.
- The offshore fund must have a minimum fund size of SGD 50 million (applies to PE fund, infrastructure fund, RE fund).
- The fund administrator must be Singapore based.
- The fund must not change the investment strategy after approval.

7.4.4 Policy Recommendations for Regulatory and Tax Framework for Foreign Investment Funds and Foreign Institutional and Individual Investors

In place of the existing framework, it is suggested that for foreign investment funds and foreign institutional and individual investors, the following new simplified regulatory and tax framework be implemented:

- i. The foreign investor entity (AIF, FII, Pension Fund, etc.) has to be registered with the home country regulator. No requirement of the place of residence or deemed resident is necessary. The entity and the fund manager are free to operate from any physical location as long as the entity in question is registered with a regulator who is an IOSCO member or a regulator with whom SEBI has a bilateral agreement or MoU. SEBI shall

take steps to enter into bilateral agreement or MoU with jurisdictions currently not covered.

- ii. The fund and fund manager have to be fully compliant with all KYC and other requirements of the home country and must complete KYC in India with SEBI along with a mandatory PAN.
- iii. The entity would be entitled to the tax treatment as agreed in the DTAA, and the accounting firm along with a lawyer in India would be responsible for compliance certificate on inward and outward remittance.
- iv. In case the entity and fund manager are registered with SEBI and compliant with SEBI regulations, there would be no tax residency risk in India for such an entity even if its fund manager is located in India.
- v. No outward remittance would be permitted by the Bank (Authorised dealer) without the Chartered Accountant certification on Tax treaty and tax compliance. Similarly, the Fund Manager is responsible for signing documents and ensuring compliance with tax laws.
- vi. SEBI would ensure registration of the Fund Manager in stipulated time as it does for other intermediaries in India. However, a strict 21 days limit would be prescribed for SEBI to ensure no bureaucratic delays happen for registering (KYC) for the Fund Manager and the concerned entity. This obviously applies to those applicants who are fully compliant and SEBI does not raise any query for additional information.
- vii. SEBI would effectively be the centralised agency for non-compliance or violations like CBI, ED and other agencies report matters to Interpol, i.e. any non-compliance of fraud etc. would be reported by SEBI under the IOSCO pact or such other bilateral agreements with Regulators overseas (who may not be members of IOSCO).
- viii. Foreign Individual Investors will be allowed to invest into India through authorised dealers i.e. banks, both Indian and foreign as permitted by RBI, subject to fulfilling the requirements of KYC and a simplified PAN application process (currently underway through online portals) in compliance with applicable laws.
 - A simplified online application process for PAN (currently underway) – foreign individual investor has to provide copy of his passport and home country equivalent of Aadhar number and PAN number.
 - The authorised dealers would facilitate the on-boarding and trading activity of such individual investors, including registration, withholding applicable taxes and filing tax returns.
 - They will only be allowed to invest in debt and equity (not in real estate, etc)

7.5 Reforming the Know Your Customer Framework in India

7.5.1 Background

The Know Your Customer (KYC) regulations mandated by the Reserve Bank of India (RBI) requires banks, financial institutions and other regulated entities to verify the identity of their customers and identify the beneficial owner where necessary. The RBI KYC Master Direction, 2016 (KYC Direction) was introduced in line with the recommendations of the Financial Action Task Force (FATF)¹⁰. The FATF recommendations and KYC Direction are aimed at preventing the use of banks and financial institutions for money laundering and financing terrorism. The introduction of KYC Direction however, has led to increasing compliance cost and customer on-boarding time around the world. In 2017, a Reuters survey across 8 countries found that customer on boarding time was an average of 26 days (Refinitiv, 2017).

The impact of the KYC Direction has been no different in India. Its effect on customer on boarding time and compliance spending is yet to be quantified in India. However, the effect of the KYC Direction on the financial services industry has been stark. One estimate by Razorpay for instance, noted that the introduction of KYC Direction led to a fall in mobile wallet usage by 40-45% (Mathur, 2018). Regulatory uncertainty around the KYC Direction and the enabling framework for e-KYC or Aadhaar based authentication is often cited as the cause for the sector's KYC woes. As a result of uncertainty, banks, financial institutions and other regulated entities are forced to use physical document verification despite the availability of many technological alternatives. Singapore, for instance, has experimented successfully with technological solutions to make the KYC process easier on the customer. We explore such alternatives and make recommendations below to ease the KYC burden on investors hoping to enter the Indian market.

7.5.2 Legal Framework for KYC

KYC requirements in India are governed by the Prevention of Money-Laundering Act, 2002 (PMLA), Prevention of Money-Laundering (Maintenance of Records) Rules, 2005 (PML Rules) and the KYC Direction. The PMLA and the PML Rules contain the broad framework for KYC, while the KYC Rules govern the operational issues with performing KYC verifications. Section 11A of the PMLA requires banks, financial institutions and other 'reporting entities' to verify the identity of its clients and the beneficial owner. Rule 9 of the PML Rules lists the conditions under which KYC must be performed and

¹⁰FATF is an inter-governmental body established to address money laundering issues by the G7 in 1989. India joined the FATF in 2010.

the means through which a beneficial owner can be identified for different types of customers.

According to Paragraph 13 of the KYC Direction, the identity of a customer has to be verified under 6 circumstances. Of the 6 however, KYC is used most often at the beginning of an 'account-based relationship'.¹¹ KYC can be performed through an Aadhaar enabled e-KYC, offline verification of proof of possession of Aadhaar, verification of digital signature on equivalent e-document of an official valid document (OVD), digital KYC or comparing the OVD copy with the original.

In the case of Aadhar based e-KYC, a customer can be verified through biometric e-KYC or through, or a One-Time Password (OTP). While non-face-to-face e-KYC is permitted for the OTP method, it is subject to certain restrictions. For instance, no other account can be opened using OTP based e-KYC in non-face-to-face mode with any other regulated entity. Notably, only banking companies or regulated entities so permitted by the Central Government can undertake Aadhar-based e-KYC authentication. In this regard, the Ministry of Finance had issued a circular dated May 09, 2019 outline the procedure by which reporting entities other than banking companies can acquire permission to undertake e-KYC.

Where an OVD copy is submitted or where offline verification of proof of possession of Aadhar cannot be carried out, Digital KYC has to be undertaken. Introduced in the recent amendment to the PML Rules, Digital KYC involved capturing the live photo of the client and the OVD/proof of possession of Aadhar along with the latitude and longitude of the location where such photo is being taken by an authorized officer of the reporting entity. Progressively, Digital KYC will be the only form of KYC allowed and existing KYC using paper records will not be permitted after a date that is yet to be notified.

Due to recent changes in the law, there has been uncertainty regarding what offline verification of proof of Aadhaar possession entails since the relevant Aadhaar regulations have not been amended to identify the modes.

In any case, foreign investors cannot use e-KYC, as the option is open only those holding annual deposits of less than INR 1 lakh (for OTP based e-KYC) and for those who hold an Aadhaar card (Paragraph 17 of the KYC Direction).¹² Foreign Portfolio

¹¹The other circumstances under Section 13 include non-account customers carrying out international transactions or transactions worth more than Rs. 50,000, customers selling third party products or reloading prepaid/travel cards for more than Rs. 50,000, when there is reason to doubt the authenticity of information provided or if transactions are intentionally structured to stay under the Rs. 50,000 limit.

¹²An illustrative list of documents required by different categories of customers is listed in Annex IV.1.

Investors (FPIs), however are subjected to Simplified KYC requirements as per Paragraph 454 of the KYC Direction. As per the simplified process, representatives of the FPI are exempt from furnishing identity and address proofs.¹³

The problem with KYC, however, is the verification of physical documents and the need for face to face interaction with the customer. In an Indian context, this means that investors have to undertake the inconvenient process of OVD verification or fairly extensive digital KYC process, especially given that the modes of Aadhaar-related offline verification have not been outlined by the Government. OVD verification has proven to be particularly cumbersome around the world. According to the Reuters survey, the average customer on boarding time in Hong Kong (38 days) is said to be much higher than the global average (26 days) due to hard copy requirements in the KYC process (Refinitiv, 2017. p.16).

The recent amendment to the PML Rules muddies the waters further by envisaging a framework where only Digital KYC would be permitted. While the move to create paperless KYC is laudable, it relies heavily on the users migrating to the DigiLocker platform, where digital copies of government IDs can be stored. The transition period for such a move could be particularly painful for many businesses relying on paper-based KYC. In addition, the amendments also bar many innovative forms of KYC that was in use in the market (through live video chat etc.) that allowed for non-face to face authentication.

As noted below, the Steering Committee on Fintech Related Issues (Steering Committee) recently recommended using innovative technologies to make the KYC process more efficient. In this vein, the Finance Ministry also recently announced that NBFCs will be permitted to rely on the Aadhaar-based e-KYC authentication carried out by banking companies.

7.5.3 Global Framework and Best Practices

The onerous compliances required under KYC regulations is an issue facing regulators around the world. Implementing identical regulations based on FATF recommendations, regulators have little room in easing KYC norms. Based on a survey of existing rules on KYC across jurisdictions, two points are worth noting. First, the FATF recommends a flexible risk-based approach to KYC, which should not disturb the normal course of business. Second, Singapore's innovative use of technology is a model that can be replicated in India. Both these points are discussed in greater detail below:

¹³The diluted KYC requirements for FPIs is summarized in Annex IV.2.

i. FATF Recommendations

The KYC Regulations are in line with the recommendations of the FATF on customer due diligence. Recommendation 10 of the FATF requires banks and financial institutions to verify the identity of the customer and the beneficial owner before or during the course of a business relationship. The FATF recommends a risk-based approach to customer due diligence where the normal course of business should not be interrupted. In the interpretive notes, the FATF recommends a simplified procedure for customer due diligence where the risks of money laundering and terror financing are lower. Thus, the FATF by design recommends a balance between vigilance and flexibility where risks of money laundering are lower. The Indian framework as discussed above focusses on the former while leaving little room for the latter. Simplified procedures are limited to Non-Banking Financial Companies, self-help groups, foreign students and FPIs. In all these cases, there is still a need to verify physical documents, which is the main concern with KYC. Based on the FATF interpretive notes, there is greater scope to adopt a risk-based approach, as discussed in our recommendation below.

ii. Singapore

Singapore is reported to have the lowest customer on boarding time (14 days) according to Reuters. This can be attributed to the innovative use of technology in the implementation of KYC norms. The Monetary Authority of Singapore (MAS) manages a technology platform to store customer information for KYC. The 'MyInfo' platform is a voluntary service where users can upload their KYC information.¹⁴ This information can be accessed by banks and financial institutions while performing KYC verification. In addition to MyInfo, banks and financial institutions can also perform non-face to face (NFTF) verification through the use of video and other government approved measures (Bhunia, 2018). This allows banks and financial institutions to perform KYC verification with minimal customer interaction. Since MyInfo is a voluntary service, the concern of user consent which was central in the case of Aadhaar would not apply.

7.5.4 Recommendations

The two main bugbears of KYC framework are the need for OVD verification and customer interaction. Three recommendations below address both concerns and propose a path towards risk-based KYC in India.

i. Use of Centralised Database for e-KYC

The CKYCR is a centralised database of all customers verified by the banking system in India. Currently, access to the database is limited to government agencies under the

¹⁴For more information on MyInfo, see <http://www.ifaq.gov.sg/MyInfo/apps/fcd_faqlmain.aspx>.

PMLA. An easy fix to the KYC process would be to allow all KYC compliant entities to use the CKYCR to cross reference new customers against existing entries in the database. Using the CKYCR also overcomes many of the data protection issues associated with biometrics verification under Aadhaar. Customers are allotted a unique identifier in the CKYCR. Banks and financial institutions can verify customers using this identifier and not actually access any sensitive personal information. Going by the Singapore example, the RBI could extend voluntary registration on the CKYCR to foreign investors. This would do away with the need for OVD verification using physical documents while maintaining the same level of scrutiny. The need to make full use of the CKYCR was echoed by the Steering Committee. In its report, the Steering Committee noted that making the CKYCR fully functional would reduce operational costs and transform the KYC process into a digital and paperless process.

ii. Explore Technological Options for NFTF Verification

Indian regulators face a unique challenge of balancing the need to curb money laundering as per the FATF framework carrying out the gargantuan task of expanding financial inclusion. In this regard the G20 High Level Principles for Digital Financial Inclusions recommends that countries balance innovation and risk, and to provide an enabling and proportionate legal and regulatory framework if digital financial inclusion is to be achieved. The aim for Indian regulators, hence, should be to encourage innovation to expand financial inclusion while providing for adequate safeguards. The Steering Committee endorses this view by recommending technologies such as blockchain to enable faster KYC.

The RBI should, hence, look at technology options to reduce the need for multiple customer interactions. The Reuters survey found that on average a KYC process requires four contacts between customers and financial institutions (Refinitiv, 2017. p.18). The use of technology can help reduce if not eliminate the need for repeated contacts in the KYC process. One example of NFTF verification is the use of videos, which many platforms in India are already experimenting with.¹⁵ To make this an option for regulated entities, RBI will need to create an enabling regulatory framework which includes a secure channel for communications, amendments to the KYC Rules to allow NFTF verification and creating safeguards against the misuse of NFTF platforms.

iii. Risk Based Approach

The RBI should also look to implement a risk-based approach to KYC. Existing KYC processes disturb the ordinary course of business against the FATF recommendation. Rather than a risk-based approach, the current KYC framework is one size fits all rule

¹⁵Aadhaar Bridge is one popular option used by fintech companies. Available at: <https://www.aadhaarbridge.com/video-id-kyc.html>.

that affects a diverse range of actors. In its Simplified Customer Due Diligence provision, the KYC Rules exempt a small list of foreign entities from the KYC process. This list can be expanded to include other categories of customers based on risk assessment criteria laid down by the RBI. Currently, the RBI leaves risk management to banks and financial institutions under Section 12 of the KYC Rules.¹⁶ The RBI should look to frame broad guidelines on risk management and define the kinds of customers who can be considered low risk. Such customers can be subject to simplified verification procedures.

7.6 Long Term Bonds – A Case for India

7.6.1 Introduction – Issue Being Discussed and the Reasons for the Choice of the Subject

As per the Economic Survey 2017-18 (**Economic Survey, 2018**), India will need about USD 4.5 trillion in the next 25 years for infrastructure development. Further, it indicates that the current trend shows that India can meet around USD 3.9 trillion infrastructure investment out of USD 4.5 trillion. It stresses the need to fill the infrastructure investment gap by financing from private investment, institutions dedicated to infrastructure financing like National Infrastructure Investment Bank and global institutions like Asian Infrastructure Investment Bank and New Development Bank (**Economic Survey, 2018**).

The Government has over the years explored various means to tide the gap towards infrastructure financing. However, there continues to be massive underinvestment in the sector largely because of the slowdown of public-private partnership model, especially in power and telecom projects, and stressed balance sheet of private companies (**Economic Survey, 2018**). These are inherently linked to issues that companies face in land acquisition and environmental clearances required for projects (**Economic Survey, 2018**).

As of 2012, India's Central Bureau of Investigation estimated that Indians have USD 500 billion of illegal funds in foreign tax havens, more than any other country.¹⁷ As per the report of the Global Financial Integrity, a think tank, USD 213.2 billion was shifted

¹⁶According to 12(b) of the KYC Rules, “Risk categorisation shall be undertaken based on parameters such as customer's identity, social/financial status, nature of business activity, and information about the clients' business and their location etc”.

¹⁷Note: Mr. S.S. Palanimanikam (Minister of Finance) stated in its response dated March 13, 2012 that the estimate of around USD 500 billion (made by the CBI Director) was made in relation to the reporting of the matter in the Supreme Court on July 4, 2011. See, Minutes of the Parliamentary Debates, Rajya Sabha, 13 March 2012. Available at: <http://164.100.47.5/official_debate_hindi/Floor/225/F13.03.2012.pdf> [Accessed on 27 February 2019].

out of India over 61 years (i.e. between 1948 to 2008) (Kar, 2010). There is also large amount of unaccounted wealth within the country which is laundered.¹⁸ The Global Infrastructure Outlook suggests that the gap between required infrastructure investment and the current trend of investment is expected to be widened over the years.¹⁹ In addition to this, S&P Global Ratings reveals that the current India's infrastructure deficit is too large to eliminate anytime soon (S&P Global Ratings, 2018). Considering the current infrastructure deficit and the illegal money stashed outside India, channelization of the illegal funds stashed overseas into development of infrastructure in India could provide the much needed impetus to the long term infrastructure investment cycle.

7.6.2 History of the Existing Policies in India and Their Shortcomings

The Government has initiated various schemes to bring such undisclosed wealth in the organised economy on the premise that citizens need to be given an opportunity to bring back assets held overseas and contribute to the nation building process. For instance:

In 2016, tax laws were amended to enable levy of tax at a higher rate on the undisclosed income under which a person could declare his undisclosed cash by paying tax, surcharge and penalty totaling to 50% of the undisclosed income. Besides, the person/ entity disclosing the income would have to keep 25% of the undisclosed income in Pradhan Mantri Garib Kalyan Deposit Scheme (PMGKDS), interest free for 4 years. This scheme was opened till April 2017. As per response by the Finance Minister in the Lok Sabha on December 15, 2017, under the PMGKDS, 21,000 persons disclosed INR 4,900 crore under the PMGKY on which INR 2,451 crore was collected as tax.²⁰ However, certain media reports stated that the scheme did not turn out to be attractive owing to exorbitant tax rate and non-immunity from certain criminal legislations such as Prevention of Money-Laundering Act, 2002, Prevention of Corruption Act, 1988 etc. (Sakse, 2017).

In 1997, a voluntary disclosure of income scheme (VDIS Scheme) was introduced. Under the VDIS Scheme, corporates and individuals could disclose unaccounted cash, securities or assets by paying 35% and 30% tax respectively. In addition, an immunity

¹⁸Draft Report on Study on Unaccounted Income/ Wealth Both Insider and Outside the Country, National Institute of Financial Management. Available at: http://static.financialexpress.com/frontend/fe/pdf/Black_Money.pdf [Accessed on 19 February 2019].

¹⁹Infrastructure investment needs 50 countries, 7 sectors to 2040, Global Infrastructure Outlook. Available at: <https://www.oxfordeconomics.com/recent-releases/Global-Infrastructure-Outlook> [Accessed on 27 February 2019].

²⁰Response by the Ministry of Finance dated December 15, 2017, available at <http://164.100.47.194/Loksabha/Questions/QResult15.aspx?qref=57904&lsno=16> (Last accessed on February 19, 2019).

was given from prosecution under various laws such as Income Tax Act, 1961, Foreign Exchange Regulation Act, 1973 and Companies Act, 1956. As reported, under the VDIS Scheme, INR 33,339 crore was declared by 4,75,133 participants (Dubbudu, 2015). The VDIS Scheme was widely criticised in the media for allowing tax evaders to escape by paying the prevailing tax rate (Pani, 2017). Furthermore, a petition was filed by the All India Federation of Tax Practitioners against the VDIS Scheme before the Supreme Court (“SC”). As reported, the SC, dismissed the petition and noted the Government’s commitment that in future it would not resort to such schemes favouring dishonest taxpayers (Pandey, 2000).

In 1981, the Special Bearer Bonds (Immunities and Exemptions) Act, 1981 was brought in to channelize the black money for effective economic and social planning. Under this scheme, special bearer bonds of the face value of INR 10,000 each were issued at par with a maturity period of 10 years and were entitled to receive INR 12,000 on maturity. Anyone could buy the bonds without inviting any scrutiny from the government. The tax department was prohibited from harassing buyers and the bond could be even bought anonymously. The catch was that the money could be considered as “white” only after the bonds matured in 1991. This scheme was eventually scrapped in 2001. The scheme had certain shortcomings such as bond holders were not entitled to avail any set-off in any tax proceedings on the ground that he has subscribed acquired the bonds which in effect didn’t isolate the bonds from the regular tax proceedings.

7.6.3 Practices Followed in other Countries

i. Indonesia

The Government launched a tax amnesty scheme in 2016 which forgives taxes and criminal sanctions, if taxpayers disclose their onshore and/or offshore assets and pay a penalty. A penalty is imposed on such declared assets ranging from 2% to 10% depending on how soon the assets are declared and whether they are repatriated to Indonesia. Taxpayers who wish to repatriate are required to transfer their offshore funds into certain banks called recipient banks. Once the funds are received by the recipient banks, the funds can be invested through investment managers or brokers (appointed by the Government to manage the funds) in the Government approved investment instruments. Taxpayers who wish to repatriate are required to keep the funds in Indonesia for 3 years (Huswara, Benjamin & Tanjung, 2016). During the 9 months amnesty period, approximately 970,000 participants declared their assets with declared hidden assets valued at USD 367.9 billion (equivalent to 40% of GDP) (Oxford Business Group).

ii. Pakistan

The Government of Pakistan recently launched '*Government of Pakistan's US Dollar Denominated Amnesty Rules, 2018*' under the Foreign Assets (Declaration and Repatriation) Act, 2018. Under this scheme, the State Bank of Pakistan ("SBP") is authorized to issue these bonds having a maturity of 5 years and an annual profit of 3% p.a. In order to implement this scheme, the SBP opens a separate account of the taxpayer and issues bonds in that account. Subsequently, SBP sends an e-confirmation to the taxpayer about the details of its investment in the bonds.

iii. Argentina

The Government of Argentina launched a tax amnesty law in 2016 (Aseng, 2017). This allowed a person to disclose his undeclared income and assets without questioning its origins or risking prosecution. The disclosed amount was given to pensioners and retirees (He, 2016). Individuals and companies can declare their assets (i) by paying a special tax of up to 15% (depending on amount disclosed), (ii) purchasing non-transferable Argentinean treasury bonds, or (iii) investing in long-term investments through a common fund in infrastructure projects, housing, small and medium sized business for a minimum of 5 years (TPA Global, 2017). During the 9 month amnesty period, USD 116.8 billion in assets were declared and USD 9.652 billion were collected in taxes and fees (Thomson Reuters, 2017). Around 98% of participants opted to pay penalties in cash and 2% chose the government bonds (Aseng, 2017).

iv. Philippines

The Government of Philippines launched a tax amnesty scheme in the form of a legislation in 2019. The Act includes two kinds of amnesty viz., estate tax amnesty and tax amnesty on delinquencies ("TAD"). Those who avail of the amnesty will enjoy immunity from tax payment as well as certain civil, administrative and criminal cases under the Tax Code. The Estate Tax Amnesty covers the period before December 31, 2017 and its rate is 6% based on the decedent's total net estate at the time of death. The TAD covers national internal revenue taxes, such as income tax, withholding tax (including those withheld, but not remitted), capital gains tax, donor's tax, VAT, other percentage taxes, excise tax and Documentary Stamp Tax collected by the Bureau of Internal Revenue (BIR), including VAT and excise taxes collected by the Bureau of Customs (BOC) for taxable year 2017 and prior years, etc. Tax amnesty rates depend on the nature of delinquency, ranging from 40% to 100%. Notably, President Duterte had vetoed provisions in the Act which would have permitted a general tax amnesty for all unpaid internal revenue taxes.

7.6.4 Recommendations

The government currently also issues securities for long duration, notably Dated Government Securities (Dated G-Secs). There are various kinds of Dated G-Secs: **Fixed Rate Bonds; Floating Rate Bonds, Capital Indexed Bonds, Inflation Indexed Bonds, Special Securities (like bonds issued to OMCs in lieu of cash subsidies) and Sovereign Gold Bonds**. However, since the Government securities are issued to meet the short-term and long-term financial needs of the government, they are not only used as instruments for raising debt, but are key instruments for internal debt management, monetary management and short-term liquidity management. There is a gap in the market for specialised security product the proceeds of which will only be applied towards addressing the infrastructure requirements.

There could be the following two mechanisms which can be utilised to help alleviate the dual problems of black money as well as funds for long term infrastructure.

SERIES 1 BONDS (Elephant Bonds)

The proposal for the application of undisclosed wealth towards subscription of Elephant Bonds is:

- i. 15% of the wealth shall be collected as tax to be deducted at source by the government;
- ii. 45% of the wealth shall be credited with the depositor;
- iii. Balance 40% of the wealth shall be invested in Elephant Bonds²¹.
- iv. 75% of the interest rate earned on such bonds will be collected as tax by the government

The key contours of the Elephant Bonds are:

- i. Issued as a fixed coupon security;
- ii. Long maturity period (for 20-30 years);
- iii. Coupon rate of 5%;
- iv. Issued in dematerialised form and tradeable on stock exchanges;
- v. Issuance will be subject to KYC and beneficial ownership check; and
- vi. Immunity from all laws including under foreign exchange, black money laws and taxation laws.
- vii. The fund would be managed by NIIF, an already existing professionally managed body anchored by Government of India in collaboration with other institutional

²¹Note: It must be ensured that the total amount of funds received by the disclosing individual as on date (35% of the wealth) plus NPV of the Elephant Bonds, calculated using the discounted method, should not exceed 60% of the total wealth being disclosed as a part of this scheme.

investors such as ADIA (Abu Dhabi Investment Authority and Government of Singapore etc. The bond maybe christened as an NIIF Elephant Bond.

Key items to consider for finalisation of the proposal for Elephant Bonds:

- i. The currency of the bonds (dragon bonds are USD denominated)
- ii. Permitted investors (besides funds from undisclosed wealth held by Indians)
- iii. Frequency of issue of the bonds
- iv. Procedure for issue of these bonds (part of issue size can be identified to be subscribed through funds from undisclosed wealth, rest can be through auction as is currently done for G-Secs)
- v. Benefit of confidentiality of the holders vis-à-vis transferability of the Elephant Bonds.

SERIES 2 BONDS

This would be a long-term infrastructure bond with the following contours:

- i. Both foreign as well as domestic capital could be used to invest in these bonds, including holders of undisclosed income;
- ii. The Bonds would be of a long-term period - 20 years or more;
- iii. The Bonds would be backed by a sovereign guarantee;
- iv. It would only invest in certain kinds of infrastructure as may be specified by the Government which shall take into account the most urgent sectoral needs;
- v. The fund managers would be appointed by the Government and could be other Government entities;
- vi. The coupon rate would be similar to other government infrastructure bonds; and
- vii. Similar to government bonds it would also have tax rebates up to a specified threshold.

08

Exim Credits and Insurance



8. Exim Credits and Insurance

A. EXIM CREDITS

8.1 Background

Exim Banks (or Export Credit Agencies (ECAs)), date back to the early 1900s and represent primarily a response to crisis cum market failure (US as a response to the Great Depression, Japan to the second world War, Korea to the Korean War). The **majority of national exports**, in any country, occur in the normal course of business on cash or short credit terms (upto 180 days from shipment) and are addressed by the commercial banks. There are however certain kinds of exports that commercial banks, tend to avoid, resulting in market failure; these are the natural playing fields of Exim Banks.

Most countries have established Exim Banks or ECAs that play a catalytic role in promoting the country's international trade, addressing transactions at the margin that **standard commercial banks cannot or will not** support due to long tenor/risk perception. Exim Banks are always strongly backed by respective national governments particularly to neutralize competition from other countries.

Export-Import Bank of India (Exim Bank), since its establishment in 1982 by an Act of Parliament, has played a catalytic role in ensuring India's increasing integration with the global economy by promoting, financing and facilitating India's international trade and investment. The Bank is **specialised in providing term export credit and medium/long-term finance for capital goods/project exports as well as overseas investment finance.**

The Bank's business is completely **in-line with its Mandate**, and can be grouped into **two major verticals**, viz. business done solely or significantly under a GOI policy mandate (**Policy Business**); and business done with a commercial orientation (**Commercial Business**). Exim Bank of India currently has a Commercial Business – Policy Business mix of approx. 60:40.

8.2 Policy Business

The Policy Business, which is done solely or significantly under a GOI policy mandate, comprises export Lines of Credit (LOCs), Buyer's Credit under the National Export Insurance Account (BC-NEIA), and the Concessional Financing Scheme (CFS). The Bank has existing **unutilized commitments aggregating USD 18 billion** (INR 1,30,000 crore approx.) under the Policy Business, comprising USD 15 billion under the GOI-mandated

LOCs, USD 1.5 billion under (BC-NEIA) and USD 1.5 billion under CFS. The Bank's lending commitment under the GOI-LOCs crystallizes when specific projects/contracts are approved under these LOCs.

Based on the pipeline of disbursements expected to be made out of the unutilized projects/contracts under the Policy Business, the Bank would require additional capital of approx. INR 6,000 crore over the next 2 years. In case further projects/contracts are referred to by the borrower Governments and approved by the Bank during the next five years, the Bank would require further capital infusion from the GOI.

8.3 Commercial Business

The Commercial Business portfolio includes, *inter alia*, credit facilities to domestic entities, albeit for their export and import activities, and for their globalization efforts through setting up of Joint Ventures/Wholly Owned Subsidiaries overseas as well as acquisition of assets/businesses overseas. This could, with GOI support, be extended to support **projects of strategic interests to India**.

Key Asian G20 Exim Banks like China and Korea also engage in a combination of Policy and Commercial Business. Korea uses the device of a separate balance sheet (the Economic Development Cooperation Fund) for concessional Policy Business, while in the case of China, like India, the same balance sheet of the Exim China is used. Again, Korea can utilise the separate balance sheet because all borrowings are done by KEXIM, which enjoys the Korean government solvency guarantee in its Act.

A Peer Group Analysis of select Exim Banks is at **Annex V**.

8.4 No Ability for Growth and Policy Limitations

As a development financial institution, Exim Bank does not raise funds through retail deposits, and primarily taps the bond markets. The Bank has, since its inception (upto March 31, 2018), received from the GOI capital infusion of INR 7,359 crore and has paid to the GOI return on capital aggregating INR 2,504 crore, while also making a tax contribution of INR 5,879 crore. Given that Exim Bank has the sole mandate to finance GOI-supported LOCs and is a dominant player in the area of financing overseas investments by Indian companies (subsidiaries/acquisitions), the Bank would have to increasingly resort to offshore financing, making it critical for the Bank to maintain its international credit rating at the same level as the sovereign rating. This would also involve significant interface with international banks that insist, *inter-alia*, on a strong capital base. Higher levels of capital also imply better Capital to Risk-weighted Assets Ratio (CRAR). Rating agencies, during the rating exercise and annual surveillance are

known to place high degree of reliance on the level of capitalisation and the CRAR. The Union Cabinet has, on January 16, 2019, approved a proposal for increasing the authorised capital of Exim Bank from INR 10,000 crore to INR 20,000 crore, and also infusion of equity of INR 4,500 crore in 2018-19 and INR 1,500 crore in 2019-20. Such infusion would be required in a sustained manner to facilitate in achieving India's strategic (both geo-political and economic) objectives.

While Exim Bank is currently subject to separate capital adequacy norms as applicable to All India Financial Institutions (AIFIs), which are akin to Basel I capital standards and require capital provision for only credit risk, it voluntarily provides capital towards market risk and operational risk as a prudent risk management practice. Further, the RBI is considering the implementation of Basel III guidelines, as currently applicable to commercial banks, for the AIFIs also. Thus, strengthening of the Bank's capital base is critical from the viewpoint of compliance with future stringent prudential regulations. Business growth for Exim Bank is a function of its ability to borrow by leveraging its equity. Leverage for Exim Bank is monitored through a Borrowing Limit, which is capped at 10 times the Bank's Net Owned Funds (NOF - essentially the Bank's Net Worth, reduced by certain intangible/other assets). The high average duration of loan assets means that the Bank cannot recycle capital, except in the long run.

Exim Bank's headroom for raising borrowings for financing its business growth is constrained by the Reserve bank of India's (RBI) prescribed ceiling of "10 times the NOF (Net-Owned Funds)" (as per the last audited balance sheet) on aggregate outstanding borrowings. NOF comprises paid-up capital and free reserves, from which, intangibles are deducted. As the contribution of retained earnings to NOF is relatively less, even at best of times, capital infusion from the GOI is critical for the Bank's ability to borrow and, consequently, fulfil its mandate of financing and facilitating large value exports, and extending LOCs at the behest of the GOI.

8.5 Evolving Vision

The current position of Exim Bank is of **paradoxical nature** requiring the Bank to play a development role in supporting national exports (including investments overseas) and the resultant economic growth, while being bound by prudential norms for commercial banks and concomitantly having no access to capital and low-cost funds. Exim Bank endeavours to be **India's Development Bank for International Cooperation** (i.e. supporting government policy in the realm of regional development and geopolitics) by supporting project exports and overseas investments by Indian companies, and give a major fillip to manufactured exports and employment generation in India.

8.5.1 Additional equity infusion

The capital base of the Exim Bank needs to be strengthened to enable it to cope with the increasing needs of Indian exporters and support India's stagnant exports.

- i. The authorised capital is INR 10,000 crore and the paid-up capital is INR 7,859 crore.
- ii. The Union Cabinet has, on January 16, 2019, approved a proposal for increasing the authorised capital of Exim Bank from INR 10,000 crore to INR 20,000 crore, and also infusion of equity of INR 4,500 crore in 2018-19 and INR 1,500 crore in 2019-20. The Revised Estimates Budget has been placed before the Parliament for consideration.
- iii. Such infusion would be required in a sustained manner to facilitate in achieving India's strategic (both geo-political and economic) objectives
- iv. In order to achieve an estimated aggregate growth level of 20% p.a., the balance capital (authorised capital less paid-up capital) of INR 6,141 crore to be infused by GOI over the subsequent two years ending March 31, 2022.
- v. The authorised capital to be simultaneously increased by a minimum of INR 10,000 crore by March 31, 2022.

8.5.2 Interest equalisation support (IES) for policy business

GOI provides IES to Exim Bank for LOCs extended, on behalf of GOI, to partner developing countries.

There are similar schemes already in place (and periodically renewed) to support short-term exports through commercial banks and it is noteworthy to mention that MOCI's Interest Subvention Scheme on Pre and Post Shipment Rupee Export Credit, provides interest equalisation support at 3% p.a. (5% for MSMEs).

In order to make Indian exports more competitive and soften the interest rates on loans extended by Exim Bank, GOI to consider providing Interest Equalisation Support (IES) for supporting project exports and trade credit. This can result in achieving GOI's strategic objectives in addition to facilitating a quantum jump in India's exports and providing a fillip to the 'Make in India' initiative and generate employment.

8.5.3 Review of Regulatory Norms for Exim Bank

The Bank is currently regulated by the Reserve Bank of India (RBI), which may continue. However, the RBI applies to the Bank, a hybrid mix of regulations designed for commercial banks and/or financial institutions (FIs) and non-banking financial companies (NBFCs) as a class. This is a paradox as the Exim Bank is emphatically not a commercial bank and its cross-border mandate is so unique within India that shoehorning it into a generic class of FIs and NBFCs is perverse. Specifically:

- i. The Bank's borrowing limit is pegged to 10 times its Net Owned Funds. The rationale behind the 10x rule is hard to discern and is not followed by any other Exim Bank across the globe. Given its 100% GOI ownership and lack of deposit taking from the public, such a restriction on Exim Bank seems unduly rigid and totally unnecessary. The limit may be enhanced to 20x with suitable Board level safeguards, if necessary.
- ii. Similarly, the prudential limits for Single Borrower and Borrower Group are prescribed by the RBI exactly as for banks, even though the Exim Bank as a niche institution must necessarily have a higher degree of concentration of exposures. This prevents the Bank from being more than just a token provider of funding to commercial projects. The setting of such limits may be left to the Board of Exim Bank, which includes GOI and RBI Directors.
- iii. The RBIs Income Recognition and Asset Classification or IRAC norms may continue to be applied to the commercial portfolio of the Bank. However, the Bank's Policy Business (Lines of Credit, Concessional Financing Scheme and Buyer's Credit under the National Export Insurance Account) done on behalf of the GOI (MEA, MOF, MOCI) may be placed on a different footing as the backstop guarantee of GOI is available for such higher risk lending.

8.5.4 Enhancement in the Corpus of the National Export Insurance Account (NEIA)

Enhancing the current authorised corpus of INR 4000 crore to INR 10,000 would enable NEIA to further India's national interest of export promotion and economic objectives by supporting Project Exports through Buyers' Credit offered by Exim Bank

8.5.5 Trade Credit Facility (TCF)

Establish a TCF under the aegis of the Department of Commerce to support short-term lines of credit extended by Exim Bank to overseas banks and financial institutions (FIs) to enable overseas buyers to import from India. TCF to provide cover for repayment risk of the banks/FIs for the line of credit from Exim Bank under NEIA, and provide an Interest Equalisation Support (IES) by GOI of LIBOR (6-month) to soften the cost of credit to the overseas buyer and make the sourcing from India attractive. The interest rate applicable to the overseas bank/FI will be 2%. The Facility would support the Make in India initiative and also help diversify India's export basket and aid Indian exporters explore the markets in Africa, South Asia, South-East Asia, CIS and Latin America, more aggressively and proactively.

8.5.6 Proposed Structure

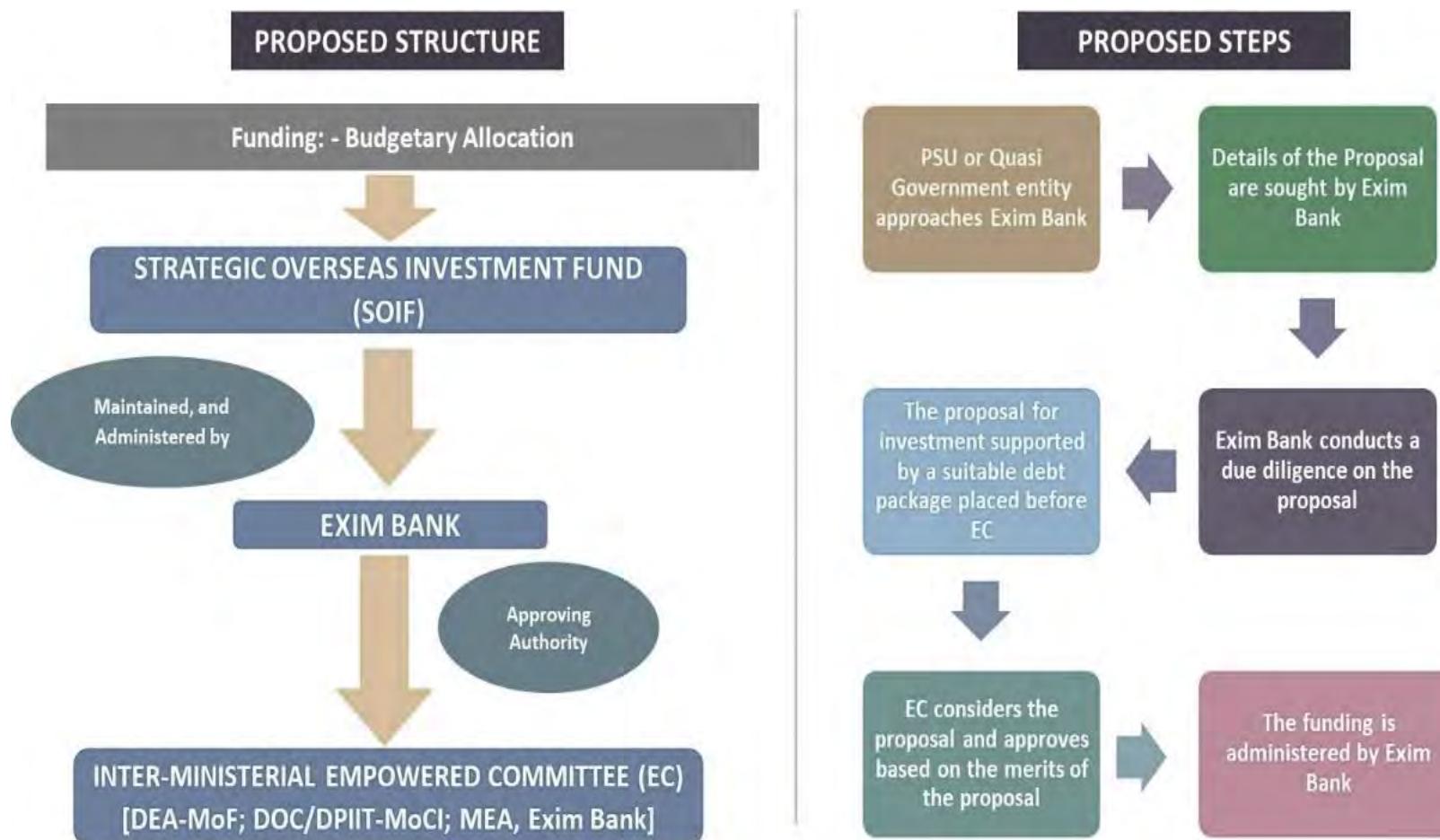
Several countries such as China, Japan, Korea and also western economies have a strong institutional support mechanism for promoting overseas investment in sectors

of their respective national interest. It is recommended that GOI should establish support to Exim Bank for facilitating acquisition/creation of assets of strategic importance to the country.

These strategic assets could broadly fall into two categories for addressing the energy security (oil, coal, nuclear minerals, etc.) and food security (agri investments overseas for growing oil seeds, pulses, phosphate mines for fertilisers, etc.). Additionally, they could be in areas such as establishing common infrastructure for exporting Indian corporates (esp. the small and medium exporters), where a single corporate is unlikely to invest (for instance, warehouses for the Pharma/textile sector in Latin America/South East Asia).

Many countries have a sovereign fund to support such strategic acquisition/creation of overseas assets. Such a fund could provide equity support as a co-investor along with Indian companies to acquire assets overseas that are considered strategic in national interest, backed by a suitable debt package, which may be made competitive through Interest Equalisation Support from GOI. An illustration of the proposed structure and steps is given in **Figure 8.1**.

Figure 8.1: Proposed Structure and Steps for EXIM Bank



B. EXPORT CREDIT INSURANCE

8.6 Background

ECGC (Export Credit Guarantee Corporation) was set up in 1957 under the Companies Act to provide export credit insurance services with specific exemption from the Insurance Act. ECGC has supported exports of value Rs.6,41,449 Crores during FY 2017-18. Around 20000 exporters of which more than 85% are MSMEs are beneficiaries of ECGC's covers. The corporation has two decades of profit and dividend record.

The Authorised capital of ECGC is Rs.5000 Crores and paid up capital of the Company is Rs.1500 Crore as on March 31, 2018. ECGC has reserves of Rs.2237 crores. The Net Worth (NW) of the company as on 31.3.2018 is Rs.3737 crores. The aggregate maximum liability (ML) of covers issued and in force as on March 31, 2018 is Rs. 95,859 Crores resulting in leverage of NW by around 26 times.

In all 34 banks that enjoy cover from ECGC extend more than 60% of export credit advances of the country. Over the last five years banks have benefitted by Rs. 4000 cr. of claim compensations on defaulted exporter accounts, under the covers of ECGC.

8.7 Regulatory Concerns

While ECGC was exempt from the then Insurance Act since 1957, in 2002 the Corporation was advised to register under IRDA, as an Insurance Company, doing miscellaneous business. Over a period, the regulations and compliances of IRDA with regard to pricing, product introduction, risk exposure level etc., have constrained ECGC from carrying out the original mandate for which it was set up. Delays in coming up with right products in a rapidly changing global trade environment have led to missed opportunities.

The major regulatory constraints reported are as follows –

- i. **Pricing:** Pricing of each product needs to be viable with margin for expenses, brokerage, cost of capital, profit sharing and earn surplus. This provision is not related to promotion of exports. Price reductions (premium) in response to market demand/slump/decrease in exports needs approval after viability on a yearly basis is arrived through actuarial calculations. It is pertinent to observe that there is no precise actuarial relationship between risk and rates when it comes to credit insurance as future default cannot be predicted based on past trend.

- ii. **Cross-subsidization:** Insurance regulations measure each risk through life cycles, namely product performance, claims, recoveries, etc. Each risk, policy and claim need to be reported through various returns. These compliances are more relevant for fire, property, motor vehicles, etc. However, it is not pertinent to export credit insurance.
- iii. **Overall surplus** is not sufficient as per IRDA. No product can subsidize other product. Being an export promotion organization, various products suiting the needs of exporters may be profitable for many years and during recession or in the event of major political events may not yield surplus resulting in deficit. ECAs worldwide operate on long-term financial sustainability basis, i.e. break-even over a long period of time, and not on an annual basis.
- iv. The regulator expects a commercial insurer to have a **stringent risk management** system. Exposure norms/prudential limit ceilings restrict the ability to support large orders. **By nature, the objective of export credit insurance is export promotion and not maximizing profit.** The stability of support by an ECA is paramount even at the cost of annual surplus.

8.8 Export Credit Insurance in competitor countries

It was reported by ECGC that ECAs in other countries do not have pressure of maximizing profits. They review and adjust prudential ceilings of exposure according to government priorities and their customer's needs. They ensure a stable level of support for exports even in difficult times. They do not have to worry about concentration risks or actuarial assessments. The overall mandate for all other ECAs includes expanding exports, filling financing gaps, level the playing field, develop capacity to support SMEs and be a haven for consistency, stability and capacity through the economic cycles. While operational independence is ensured, the mandate while being compatible with objectives is expected to be sustainable over a long period of time.

8.9 ECGC's status

The initiatives of other ECAs deprives exporters from India of a level playing field as their counterparts are backed by respective ECAs in covering risks liberally on various buyers in various countries. Due to the regulatory constraints, ECGC's operations presently are being limited resulting in unwarranted restrictions, thereby denying the much-needed hand-holding which Indian Exporters need in difficult times. By denying cover for loans and buyer limits, considerable export opportunities are lost. The bank lending to exporters is also suffering similarly while in other countries ECA's support through their guarantees to the respective banks ensures steady credit flows.

8.10 Alternate strategies

- i. **Regulatory Liberalisation:** In the Indian context the exporters need to be supported to ensure diversification of trade to Africa, Latin America and South East Asia and other potential markets, in line with the Government of India's objectives and to ensure growth. Focus in respect of new markets is bound to result in deficit in the initial years which as an ECA is a reasonable proposition whereas continuing deficit may not be in line with regulatory guidelines. Moreover, ECGC may consider further reduction in premium rates in respect of exports to countries under focus of GOI which may not be possible under regulation if there is a product wise deficit. If the above regulatory constraints are eased, ECGC will be in a position to back the exporters and banks liberally in augmenting exports.
- ii. **Promotion of MSME:** Various export promotion councils and industry associations have represented to GOI, stating that manufacturing MSMEs particularly in labour intensive industries like Leather, Engineering, Chemicals, Carpets, Textiles etc., have been/are losing their competitiveness due to the twin problems of low credit availability and high cost of credit. Additionally, credit in rupee terms adds to the cost due to hedging requirements. **Export credit in foreign currency** at the pre-shipment and post shipment stage alleviates the problems to a great extent.
- iii. It is observed that the foreign banks disburse 90% of their credit in FC while the PSU banks do so only to the extent of 40%. Other private banks are able to disburse almost 60% in FC in their export credits. It is also of equal concern to note that the actual share in overall export credits of PSU banks have also shrunk from over 65% to 52% approximately. The market vacated by PSU bank over the past 4 years have not been adequately filled by private banks and foreign banks. The export credits of PSU bank have fallen by 40% and the overall export credit in the country by 25% since 2015.
- iv. An analysis of number of accounts reported by banks that availed cover from ECGC in the last four years reveals that around 1000 accounts have been moving out of the ECGC's portfolio every year leading to a drop in outstanding of Rs. 25000 crores which effectively would mean drop of disbursement of Rs. 1,00,000.00 crores over the last four years.
- v. Considering the fact that it is the GOI owned banks that traditionally promoted and nurtured MSMEs in exports the declining number of accounts and their sliding share in export credit disbursal is cause for great concern. It is imperative to give a mandate to GOI owned banks to **revive credit sanction particularly export credit in Foreign Currency to new MSMEs** by providing with working capital guarantees that indemnifies them back to back. It would be advisable to consider compensation to the

extent of 100% and 90% of loss towards principal and interest respectively to the banks to ensure fresh credit sanctions to MSMEs are initiated.

- vi. Another option would be to **factor the bills at the post shipment stage without recourse to the exporter as ECGC would take the risks of non-payment of overseas buyer on its books**. Factoring if done in foreign currency also saves on costs towards hedging. In the regular credit insurance business, the reinsurance support is backing ECGC's portfolio. The same is not available for credit insurance linked to factoring operations.
- vii. Though some private players offer export credit insurance to exporters in India their role is limited to highly profitable transactions involving large, established and highly rated exporters with buyers in developed markets. Moreover, the private players do not support the commercial banks in lending for export purposes. Thus, to intensify the role of ECGC in supporting exports and in export credit to exporters especially to MSMEs is very crucial and systemic. Strengthening ECGC through reinsurance for factoring services will enable expansion of its role by enhancing its ability to take bold and calculated risks in supporting exports to new and emerging markets in addition to the existing markets.
- viii. It may be noted that most of the ECAs, even in OECD countries like US, Canada, Australia, Germany and many others have a support mechanism by way of **guarantee to the lenders of working capital particularly to SME exporters thus ensuring liberal credit to the export sector**. Indian exporters are denied a level playing field in the absence of such interventions. The present proposal will help in motivating banks to sanction new export credit facility and disburse liberally export credit to MSMEs.
- ix. In the present context the exporting units registered as MSMEs will readily be included. For others, the maximum export credit outstanding with banks should be not more than Rs.10 crores with mandatory GST registration. This will also ensure abiding by the RBI guidelines for threshold of large borrowers. It is observed that many SME exporters do not obtain the MSME registration certificate. Hence this provision needs to be made.
- x. **Capital Augmentation:** A corpus of Rs. 350 crores with a leverage of 20 times will give a headroom capacity of Rs. 7000 crores. The normal rotation of outstanding under short term exports is 4 times as the export bills are generally drawn on 90 days. Hence expansion in exports of around Rs. 28000 crores can be envisaged.
- xi. It is proposed to guarantee the banks back to back any loss in the principal portion of the total lending fully and the loss in interest dues to the extent of 90%. This will ensure that the losses on the lending margin will also be borne by the banks as they would

make surplus in all successful transactions. It may also be clarified that this support will be applicable to only sanctions pertaining to new export credit facilities to be made by the banks to the MSMEs in the labour-intensive sectors.

09

Enhancing Merchandise Export: In Need of Comprehensive Reform



9. Enhancing Merchandise Export: In Need of Comprehensive Reform

9.1 Background

Enhancing merchandise exports is closely linked to domestic manufacturing and trade competitiveness with a very strong positive co-relation. Tapping external markets requires competitiveness at the national level, sectoral and regional levels and enterprise level, and an overall export strategy would address each of these areas to synergize endeavors.

9.2 Status of Exports

Since the global economic crisis in 2008, India's merchandise exports have increased from USD 185.3 billion to USD 303.5 billion; however, this is below the level of aggregate exports achieved in 2013-14. Its share in global exports remains at 1.68% in 2017, as per WTO. India's share in the total imports of the top 10 importing nations is below its overall share in world exports (**Table VI.1 in Annex VI**)²². It is higher than the average of its global share in the case of the US and Hong Kong and less than half for China, Germany, Japan and France. Leading importing nations such as Japan, France and Republic of Korea rank very low in India's export profile.

In terms of products, India's presence in top ten imported items of the world is varied. India's share in the world's top imports is marginal. In the top three world imports (at the 2-digit level) of electrical machinery and equipment, machinery and appliances and vehicles (excluding mineral oils), its exports as a share of total global imports stand at 0.32%, 0.7% and 1.1% respectively. However, in gems & jewellery, pharma, organic chemicals and iron & steel, it enjoys a respectable position (**Table VI.2 in Annex VI**). India's exports to the top 10 importing nations of their top imported products are very low, indicating its shallow footprint in these markets, as per a forthcoming CII analysis. On the other hand, in certain products, India's exports at the 4-digit HS level to the top ten importing nations figure high in their imports.

9.3 Analysis of future trends

The global trade situation is currently in flux, presenting both opportunities and risks for Indian exports. Some key trends that will impact India's exports in the near future include:

²²The data is for financial year in the case of India's exports from EIDB and calendar year in the case of other countries' imports from Intracen. Exports of one country need not match with imports of partner country.

- i. Global trade slowdown owing to recent trade measures forecast at 3.7% for 2019;
- ii. Shift in global value chains due to rising wages in China with countries like Viet Nam gaining traction;
- iii. Increasing technology advance leading to new products and increasing services component in manufacturing;
- iv. New free trade agreements such as RCEP and CPTPP and progress in implementation of existing FTAs such as ASEAN Economic Community;
- v. Contracting share of labour intensive products; and
- vi. Rising trade in services which are growing faster than trade in goods.

Keeping the trends mentioned above in mind, India's goods exports would be expected to remain at a share of 1.8% of world exports or would even fall. With global exports rising at a conservative estimate of CAGR of 3.5% in the next 5 years, it would go up from USD 18 trillion in 2017 to USD 21.4 trillion in 2023. If India does not increase its share, its merchandise exports would rise to USD 385 billion in 2023. Department of Commerce has set an ambitious target of doubling India's exports by 2025. This growth from USD 504 billion exports of goods and services in 2017-18 to above USD 1,000 billion in 2025-26 would imply an underlying growth rate of exports of above 9% per annum. While merchandise exports constitute close to 63% of total exports, the share of service exports has been 37% during the last three years, 2015-16 to 2017-18. Assuming these proportions remain unchanged, a doubling of merchandise exports in six years would mean going from the base 2017-18 level of USD 309 billion to about USD 618 billion by 2025-26, and service exports going from USD 195 billion to USD 390 billion. These are challenging targets which require implementation of the recommendations of this report.

9.4 Policy changes and multi-pronged export strategy

It is often (most often) contended by experts that yes, Indian exports have performed badly but it is due to our exchange rate policy. As discussed earlier, this is at best a bad (and untrue) excuse. India's real exchange rate index (BIS) between 2003-12 was 97.1; between 2012-17 it has averaged 97.8. Countries that have really performed well (Bangladesh and Viet Nam) have seen a large increase (over 30%) in their real exchange rate. As has China (28% appreciation), as has Philippines (21%) and Thailand (10% appreciation).

The overall strategy for manufacturing goods for exports would need an end-to-end focus on ensuring domestic competitiveness, connectivity to evacuation networks, and aggressively targeting key markets for market promotion. Such a comprehensive strategy has not been taken up so far as multiple agencies including different

ministries and departments, institutions, state governments and so on need to be on the same platform and strategically aligned. The focus has been on export promotion through incentive structures; however, many of these may not be compatible with WTO as India has moved up the income ladder.

A multi-dimensional export strategy covering, the following aspects need to be implemented. This is in addition to a complementary macro framework mentioned above, especially with regard to corporate taxation.

i. Identifying key products for specific key markets

A targeted export promotion program specifically addressing key imports of leading importing nations can build up India's exports. This would involve: (i) identifying items at the 4-digit HS level where India has an export advantage using big data analytics and building up domestic competitiveness in these products; (ii) identifying key markets for these products; and (iii) identifying key products imported by top importing nations and building up competitiveness in these products.

ii. Market access

In several key importing nations, non-tariff barriers have prevented exports from India. Some instances include pharmaceuticals in Japan, meat products in China, fishery products in the EU, etc. In other markets, India suffers from higher tariffs on its products. These barriers should be identified through consultations with industry associations and taken up with the respective countries, starting with major countries with which India has FTAs.

iii. Marketing promotion

Intensive marketing promotion is required to be undertaken, especially in key markets. This requires both policies to address on-ground activity and market information. Currently, several export promotion councils are tasked with promoting specific products. At Indian diplomatic missions overseas, trade is an important task for policy development *but not for marketing which requires specialised expertise*. Further, an apex trade promotion agency such as UKTI, Austrade, MATRADE, etc. is missing in India. This is a need to create such an agency.

iv. FTAs

It is important to note that India must remain part of mega trading agreements under negotiation and also consider entering into existing such agreements. Otherwise, it is at risk of facing higher import duties in countries which are part of agreements where India is excluded. India must also negotiate future trade agreements keeping both its offensive and defensive interests as part of the strategy.

v. Standards and Compliances

An agenda of information on standards and compliances and handholding may need to be considered. Standards and compliance infrastructure such as quality testing labs and certifications need to be built up. Mutual recognition of standards should be negotiated.

vi. Trade Facilitation

Trade facilitation in terms of processes and digital systems is proceeding at a rapid pace. Some areas that need to be addressed include: (i) Strengthening the system of Authorized Economic Operators for greater efficiency and building awareness; (ii) Setting more procedures on the Single Window System which would have information on relevant notices, fees and so on; (iii) Better risk management system for wider coverage of products and more certification agencies; and (iv) Port dwell time to be fast-tracked so that it reaches global best levels.

vii. Trade Connectivity

Often direct flights to certain key markets emerge as a constraint for companies looking at exports. Business visas in other countries need to be facilitative, involving negotiations with these countries. Shipping lines may need to be examined.

viii. Trade Infrastructure in States

State governments need to proactively develop export promotion strategies and implement them quickly. A major thrust would need to be placed on connecting production centers with the most efficient and quick evacuation logistical networks. Similarly, adequate testing and certification facilities need to be available. Sector specific industrial parks with top-grade support infrastructure can be strengthened to cater to export markets.

ix. Industrial Clusters

Industrial clusters are key manufacturing nodes and many of them undertake exports. These need to be provided with the right facilities in terms of supportive infrastructure, common facilities, and sustainability solutions. These should also be promoted to international markets.

x. Enterprise Competitiveness

Entrepreneurship training, supply chain quality and competitiveness are an imperative to address the overall cost of doing business. Information awareness on key markets, standards and certifications, and other issues is required for businesses, especially small enterprises. A key requirement would be access to credit at globally competitive rates.

- xi. Using new technologies for monitoring how markets are evolving and new forms of global value chains are emerging and formulating prompt policy responses.
- xii. Formulating policies directed at attracting FDI from lead firms in GVCs.
- xiii. In some technology-intensive sectors, including biotechnology, pharmaceuticals and medical devices, the country needs to expand its talent pool. Increasing the number of pure sciences Master's and PhDs at IITs, IISERs, IISc, and other Tier 1 institutions to three times would help bridge the demand-supply gap in the industry. There is also a need to create stronger industry-academia linkages. Premier institutes should tie up with leading companies to offer relevant internships that provide students exposure to the latest technologies. Institutes can seek the help of industry associations and MoHRD to involve them in upskilling college students. The curriculum in colleges should be updated regularly to keep up with industry requirements.
- xiv. It is extremely crucial to stimulate research and development efforts for climbing up the value chain in exports. With this objective, the Government should retain the current 150% tax credit on R&D, and increase it to 200% for long-term projects. In addition, selected outsourced R&D should be eligible for the credit as well. Further, R&D tax benefits should be extended to Limited Liability Partnerships.

9.5 Strategy on Customs Tariff

India turned a corner in 1991 with its commitment to an increasingly liberal trade policy and a move away from trying to protect Indian industry behind tariff walls. India's GDP growth rate broke away from its traditional, glacial pace, and the economy benefitted. After consistently following this strategy for over two decades under different governments, and with tariffs remaining largely low and stable, India's average MFN tariffs increased in 2017. This was followed by a further tariff increase, both as announced in the 2018 Union Budget and later again in 2018.²³ This trend needs to be arrested and reversed, with a return to a strategy of generally lower and simplified tariffs to improve the ability of Indian exporters to link up with rapidly evolving global value chains. Otherwise, Indian industry runs the risk of falling behind and becoming uncompetitive, despite the large size of its domestic market, resulting in economic losses for Indian consumers and producers.

²³In paragraph 160 of the 2018-19 Budget speech, the Finance Minister stated that: "In this budget, I am making a calibrated departure from the underlying policy in the last two decades, wherein the trend largely was to reduce the customs duty. There is substantial potential for domestic value addition in certain sectors, like food processing, electronics, auto components, footwear and furniture. To further incentivise the domestic value addition and Make in India in some such sectors, I propose to increase customs duty on certain items."

India's tariff structure should be rationalised, simplified, and made more predictable. Both the upper range of tariffs and the number of tariff rates should be reduced over a five-year period. The average MFN tariff for non-agricultural goods should be phased down and reduced to a single digit, closer to the current trade-weighted tariff average. The so-called nuisance tariffs (up to 2 or 3%), which serve little purpose, should be reduced to zero over a three-year period.

To the extent that tariff increases are felt necessary for building domestic capacity in specified new technology areas, these should be exceptional. They should be based on a thorough analysis of the actual possibility of building such capacity behind a tariff wall, take into account different stakeholder views, and be applied on a temporary basis, with a built-in sunset clause that specifies when the tariff would return to its pre-protection level. While in operation, there should be an annual reduction in the tariff rate to facilitate industry adjustment.

9.5.1 Increase in tariffs reversing two decades of the underlying trade policy

Table 9.1: Increase in tariffs

Year	Simple Average of MFN Tariff for All Products	Simple Average of MFN Tariff for Non-Agricultural Products
2010	13%	10.1%
2011	12.6%	9.8%
2012	13.7%	10.4%
2013	13.5%	10.2%
2014	13.5%	10.2%
2015	13.4%	10.1%
2016	13.4%	10.2%
2017	13.8%	10.7%

Sources: https://www.wto.org/english/res_e/booksp_e/tariff_profiles11_e.pdf; https://unctad.org/en/PublicationsLibrary/wto2012_en.pdf; https://unctad.org/en/PublicationsLibrary/wto2013_en.pdf; https://unctad.org/en/PublicationsLibrary/wto2014_en.pdf; https://unctad.org/en/PublicationsLibrary/wto2015_en.pdf; https://unctad.org/en/PublicationsLibrary/wto2016_en.pdf; https://www.wto.org/english/res_e/booksp_e/tariff_profiles18_e.pdf.

The 2019-20 interim budget speech did not introduce tariff increases. It had a short section that stated:

“66. To promote the “Make in India” initiative, we have undertaken rationalization of customs duties and procedures. Our Government has abolished duties on 36 capital goods. A revised system of importing duty-free capital goods and inputs for manufacture and export has been introduced, along with the introduction of single

point of approval under section 65 of the Customs Act. Indian Customs is introducing full and comprehensive digitalization of export/import transactions and leveraging RFID technology to improve export logistics.”

9.5.2 The tariff regime needs to be simplified, rationalised and made more predictable

- i. Reduce the number of basic customs duty rates for industrial products:
 - This should be done in a phased manner, mostly over five years;
 - After the five-year transition period, tariff rates could be 0, 5, 10, 15, 20 or 30 per cent;
 - Over time, further reduce the range of the tariff regime.
- ii. Reduce the so-called nuisance tariffs (of up to 3%) to zero.
 - The products affected would include natural sands, iron ore and concentrates, oils and other products of distillation of coal tar, unwrought nickel, nickel plates and bars, cyclic hydrocarbons, ‘other aircraft’, certain parts of specified goods.
- iii. Reduce the range of the existing basic customs duties, i.e., phase in a reduction of the highest tariff rates to 30% over five years, and lower them over the next ten years.
- iv. A process should begin to convert existing specific or complex tariffs into ad valorem tariffs. The tariff rates to be selected should, in general, be one of the non-zero customs duty rates noted above once the 5-year transition period is over, i.e., 5, 10, 15, 20 or 30%.
- v. In certain very limited number of cases, particularly new technology products, basic customs duties may need to be increased to provide domestic industry with time to become competitive. In such cases, the process should involve:
 - An analysis of the need for such relief, including an assessment of the potential for growth and maturity, and a consideration of the views of user industries and other stakeholders, both domestic and foreign;
 - Higher customs duties should be consistent with India’s obligations under the WTO and other agreements;
 - Within a maximum pre-specified period of up to ten years, the basic customs duty should be reduced to its original level from which the increase took place;
 - During this maximum pre-specified period, there should be a linear reduction of the duty each year to ensure there is time for adjustment while the industry becomes competitive and garners market share.

The basic customs duty rate of 12.5% should be reduced to 10% over a five-year period, with the rate being reduced to 12% now, to 11% after three years, and to 10% after five years. The products affected would be flat rolled products of iron or non-alloy steel.

A similar treatment could be done for rates under 7.5% to be reduced to 5%. The products under 7.5% are mainly intermediate input products or machinery. They include, for instance, chemicals, mineral and chemical fertilisers; flat rolled products of stainless steel; copper tubes and pipes; aluminium bars and plates; nuclear reactors; steam turbines; internal combustion piston engines; machine parts; pumps; industrial or lab furnaces; weighing machines; ships derricks; cranes; self-propelled bulldozers; harvesting or threshing machinery; other agricultural machinery; machines for preparing textiles fibres; weaving machines; knitting machines; other textiles clothing related machines; metal rolling mills; lathes; machine tools parts and accessories.

9.5.3 Explanation

Economists have emphasised simple tariff regimes, with a small range, and low peaks. An early example of this is the Raja Chelliah Committee Report of 1993, which stated that:

“the very high or high rates applicable to most commodities, the multiplicity of statutory rates, the wide spread of rates and the continued issue of a large number of exemption or concessional rate notifications not only made the administration of the system extremely complicated, but led to unintended and undesirable effects on the allocation of resources in the economy. ...there is general agreement now that the import tariff system should be drastically simplified, the levels and spread of the rates of duty must be reduced significantly and as early as possible with the re-structuring of the duties, most of the notifications must be eliminated.”

This conventional wisdom is still valid. The attempt in the suggestions above is to implement them while maintaining the higher level of protection that is provided to a limited number of products.

The simplification and reduction of tariffs are suggested to be phased in mostly over a five-year period, to allow for adjustments. Most of the adjustments involve small tariff reductions which should be possible to be managed while simplifying the tariff regime, and to reinforce the message to the world that India is continuing to pursue a liberal, rule-bound trade policy.

The specification of a limited number of tariff levels, and pre-specifying the transition period would reduce any arbitrary changes in these tariff levels at a later date as well.

The suggestions do include the possibility of providing tariff protection to help establish domestic industry in new sectors. However, even this is within a prescribed set of limitations and should be done only after an inclusive assessment of the issues concerned and the condition that such tariff increase is temporary, to be phased out in a pre-specified manner during the period for which it is announced (maximum ten years).

It is very important that arbitrariness in tariff policy is reduced also for agriculture. Though not suggested above, it is important that any increase in agricultural tariffs would also be based on an assessment study justifying the tariff increase. Such a study would result in informed policy judgments and a monitoring of the conditions which were seen as the basis for raising the agricultural tariff.

9.6 Value Chain Perspective of Trade

International Trade is only the front end of a longer economic policy value chain. The front end of the value chain can only be as good as the rest of the chain. This implies that a satisfactory trade policy depends heavily on the rest of the upstream economic policy. This requires constant flow of research, analysis and expert advice to the policy makers from a diverse group of experts which will include a mix of sectoral experts, economists from various sub-disciplines of the subject, policy makers, technology experts, industrialists and business experts. The present board of trade in the Department of Commerce is woefully inadequate in this respect. There is a need to recast an advisory council of the Commerce Minister whose expertise should be available to him on a regular basis.

All our policy action both horizontal and vertical should be driven by these considerations. This paradigm of production will have to be consciously promoted by the government; therefore, cohesive action by all departments and their agencies is of essence. The whole of the government approach greatly facilitates the smooth administration of the global and regional value chains. The concept of value chain-based manufacturing focuses on fragmentation of production. Therefore, each participating country/firm in a given value chain finds a position on the value chain based on its strength in that particular segment of the value chain.

For the industry this would mean developing capacities in skills and access to the right equipment, management capacities, investments, technology, research and development, etc. For the government, it would require a 360-degree perspective on

policy and facilitation in several relevant areas of the segment of value chain, which is promoted within the country. Therefore, the industry and the government need to move in tandem. It's a relationship of give and take. While the industry must respond to the stimuli, the government must create ideal eco-system for industry to deliver its best. The value chain-based manufacturing requires not simply a change in the mind-set but also a far greater partnership between industry and the government and its agencies.

9.7 Bureaucratic Reforms

The first imperative is to identify aggressive participation in international trade with a view to promote growth and economic development as one of the national objectives. A set of targets broken into many sectoral targets must be adopted by the government and its relevant departments.

International trade should not remain a task assigned to the Department of Commerce alone, but the concerned departments must also own it. All departments and arms of the government need to be assessed, *inter-alia*, on this parameter. This would bring synergies among what various departments do.

We need to create participative mechanisms for decision making, which will assimilate the points of view of various sector departments and arrive at a policy decision. Some years ago, there was a Committee of the Cabinet on Trade and Economic Relations (TERC), similarly, there was also a Cabinet Committee on WTO. These institutional mechanisms helped in participatory decision making whereby subsequent resistance by non-accepting departments were neutralized after a debate. This also helped in establishing the ownership of all concerned of the decision.

The state governments have a large role to play in enhancing India's role in world trade. Recognizing this, the Foreign Trade Policy 2015-20, had suggested the creation of a Council for Trade and Development with the participation of trade ministers from all state governments. The council has been created and meets periodically. It has helped in creating synergies and improving understanding on various issues affecting international trade.

Industry and businesses operate at several scales. Consequently, for any policy approach, to be effective, has to be multi-layered. However, an effective percolation of policies, in order to stimulate rightful responses, requires wide and in-depth spread of reform measures among the stakeholder community. There is a strong case for institution building in areas where future reforms have to be pushed. India's size and complexity does not allow a linear control or supervision of all reformative action. At

the same time, it is acknowledged that the reform process, to be effective needs to be regularly monitored at the highest level.

This approach requires a shift in our policy action in areas such as import duties, development and operation of trade infrastructure and logistics, accelerated development of technical regulations helping faster integration with existing production networks, new institutional arrangements such as Regional Trade Agreements, greater investment in Research and Development in selected sectors, faster adoption and development of digital technology and selectively liberalized and facilitated framework for investments and adoption of technology.

Therefore, the role of management information system becomes quite important in today's governance. Several reforms in the area of logistics and infrastructure development have been initiated. They are pursued by different departments and agencies. While the relevant departments or agencies execute developmental projects, Management Information Systems are required for review at the highest level in the government. This is, particularly, true in the case of trade infrastructure, such as ports, special economic zones, Inland Freight Stations, Integrated check-posts, Freight corridors, etc.

9.8 Importance of GST

The adoption of the GST in a significant way has removed barriers within the country, which will help in improving India's competitiveness in the long run, however, this is not enough as there are several other barriers in the way of international trade. Such barriers can be seen in sectors such as agriculture, urban development, land, transport, labor, environment, etc.

Similarly, there is a lot to learn among the states from each other in the area of logistics, infrastructure, trade facilitation, local taxation on goods and services, etc. Therefore, this institutional mechanism needs to be a much deeper and wider engagement. GST governance has introduced us to the instrumentality of the GST council. It has proved its worth and is replicable in other sectors, as well. Since, agriculture and labor need reforms in many areas. To begin with a Council for Agriculture and a Council for Labor Reforms could be considered.

9.9 Conclusion

With a comprehensive set of strategies including all stakeholders, India can build up its export share commensurate with the size of its economy. India accounted for 2.6 trillion GDP in nominal terms of a global GDP size of USD 80 trillion in 2017 or 3.27%.

The 2017 world export figure stands at about USD 18 trillion, which if assumed to grow at a CAGR of 3.5% would expand to about USD 21.4 trillion in 5 years. Taking India's share to 3.3% would imply total goods exports at USD 706 billion from about USD 320 billion in 2018-19. The growth rate that India's goods exports would need to achieve would be over 17%. During the high growth decade 1998 to 2007, world exports grew at an average rate of 10.2 %. The next decade (2009-2017) world exports have grown at just 1.5 % per annum. Over the last seven years, world exports have grown at just 0.5 % per annum. The last three years have been better – world growth at 3 %. The prospects for world trade growth growing at double digits anytime soon are slim. On the optimistic side, Indian exports growth have exceeded world exports growth by over 10 percentage point a year in the past. *This is a goal well worth striving for, and achievable, if the policy set outlined in this report is adopted.* Additionally, India's tariff structure should be made simple and more predictable. The upper range of tariffs along with the number of tariff rates should be reduced over a five-year period.

10 Merchandise Export Sectors



10. Merchandise Export Sectors

10.1 Pharmaceuticals

10.1.1 Global Industry Overview and India's Relative Performance

The size of the Global pharmaceuticals market is estimated to be ~USD 1.2 trillion. The Indian pharmaceutical sector was valued at USD 33 billion in 2017. India's pharmaceutical industry is expected to expand at a CAGR of 22.4% over 2015–20 to reach USD 55 billion. According to industry estimates, India is likely to become one of the Top 3 pharma markets by 2030.

India is the largest provider of generic drugs globally. Indian pharmaceutical industry supplies over 50% of global demand for various vaccines, 40% of generic demand in the US and 25% of all medicine in the UK. The cost of production in India is around one-third of that in the US and almost half of that in Europe; labour costs in Indian pharma have been lower than other manufacturing hubs by up to 40%. India's pharmaceutical exports stood at USD 17.27 billion in 2017-18. In 2019-20 these exports are expected to cross USD 20 billion. The sector accounted for ~6% of the country's total exports of USD 303 billion in 2017-18. It is one of the top five sectors in the exports segment; and among the top three contributors in reducing India's merchandise trade deficit. Exports grew at a meagre 3% due to increasing regulatory concerns and pricing pressures in the global markets, including the US.

The Pharma industry has generated employment for more than 2.5 million people in India. Direct employment of more than ~500,000 people (in sales and operations), and indirect employment for more than 1.5 million (at chemists, stockists, vendors etc.). India's strength in pharma exports is critical to sustaining and growing this large workforce. 100% Foreign Direct Investment (FDI) is allowed under the automatic route for greenfield pharma. 100% FDI is allowed in brownfield pharma; wherein 74% is allowed under the automatic route and thereafter through government approval route. Between April 2000 – June 2018, the Indian pharmaceuticals market attracted USD 15.8 billion in FDI.

10.1.2 Key Challenges Faced by the Pharmaceuticals Sector in India

- i. Excessive dependence on China for sourcing Active Pharmaceutical Ingredients (APIs):

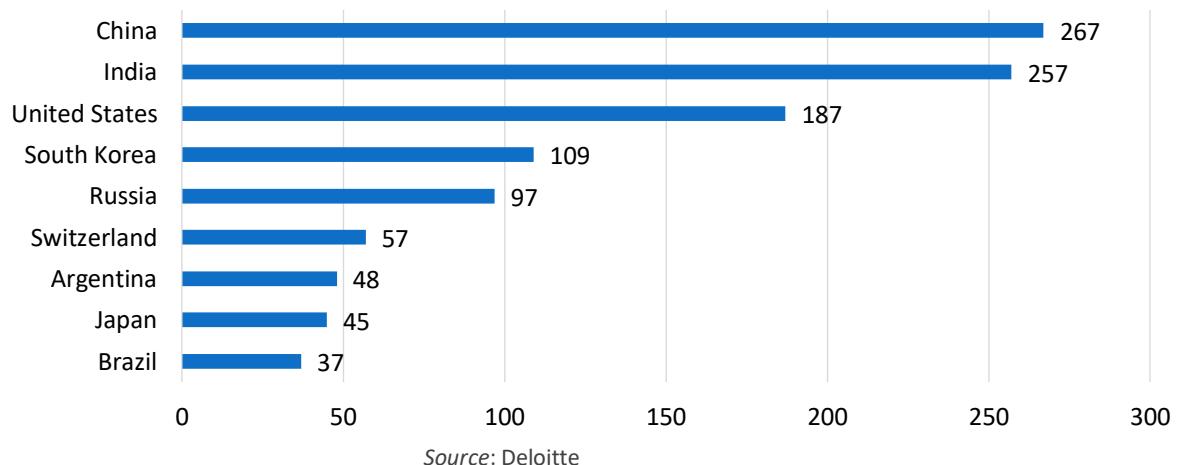
Import of APIs has grown at a CAGR of 11%, from USD 800 million in 2004 to USD 2.8 billion in 2016. China alone accounted for ~60% of all such imports by volume, and ~70% by value in 2016; the price differential between Indian and Chinese

manufactured APIs is estimated to be ~25-30%. For antibiotics, India is heavily reliant on Chinese imports for both, APIs as well as the key intermediates such as 6APA (100%); Penicillin (98.5%), Ciprofloxacin (99%). India is also heavily dependent upon Chinese API imports for many drugs present in National List of Essential Medicines (NLEM). The share of other countries in India's API import basket in 2016 was small as compared to China -- Indonesia (6.8%), Singapore (6.2%), US (4.8%), Korea (4.6%), Thailand (4.2%). When Indian pharmaceutical companies participate in US and EU markets, any non-supply due to issues in the sourcing of APIs or Key Starting Materials (KSMs) can be very costly, in the form of missed revenue opportunities, replacement of supply by competitors and high penalties for non-supply.

ii. Competition from China in generics and biologics:

According to Frost & Sullivan, China's biologic drugs market expanded from USD 9.13 billion in 2012 to USD 22.13 billion in 2016, an annual growth rate of 25%, ranking China as the world's fastest-growing biologics market. Frost & Sullivan forecasts the market's total value at USD 47.45 billion by 2021. By comparison, the Indian market for biologics was valued at USD 0.92 billion in 2016. It is projected to reach USD 2.2 billion by 2025. Biotechnology Industry Research Assistance Council (BIRAC) estimates that USD 70 billion worth of biologics would go off patent by 2020, which presents a huge export opportunity for India.

Figure 10.1: Number of Biosimilars in Development by Country



iii. Excessive regulation:

The Indian pharmaceutical industry suffers from excessive regulation, and frequent changes made thereto, by the Central Drug Standards and Control Organisation (CDSCO) and Food and Drugs Administration of the state (State FDA) in which the

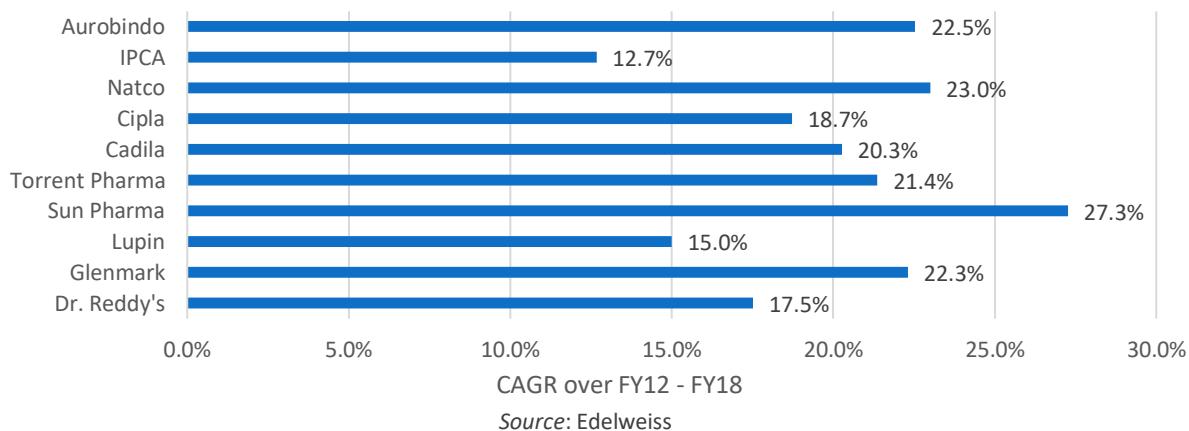
company and/or the manufacturing unit is located. There are several provisions (which are either unnecessary or redundant) and operational issues, such as:

- **In the CDSCO:** Post-approval change guidance needs to be updated. Notifiable post-approval changes should be considered as 'approvable', unless CDSCO reverts within 30 days of filing (as was the case in the initial guidance). Currently, a company has to wait for a formal approval letter, before implementing the change. There are several technical issues with the SUGAM portal of CDSCO. These need to be understood in an open meeting with stakeholders and resolved.
- **In Drugs & Cosmetics (D&C) Rules:** Multiple and parallel notifications to amend labelling requirements under the D&C Rules, 1945 requiring the pharmaceutical industry to bring in frequent changes in labelling/artwork. License to manufacture for sale for new drugs is granted by the State Licensing Authority (SLA) based on approval from the CDSCO. In order to prevent delays the timelines for processing applications by the CDSCO/SLA must be fixed.
- **In the Subject Expert Committees (SEC) set up by the CDSCO and DCGI:** The system to conceptualise clinical trial protocols is under-developed. As a result, the viva-voce style review of clinical trial protocols and clinical data by SECs poses a huge risk for companies that develop new drugs, biologics, biosimilars or devices. SECs suffer from uncertain schedules and is dominated by the Delhi medical community. The agenda is determined in a non-transparent manner and last-minute changes are common. Once a SEC gives marketing approval, the company again has to go back to the SEC for pack insert approval, despite the pack insert forms being part of the dossier submitted to the SEC in the first instance.

iv. Excessive dependence on the US and Generics:

The Indian pharmaceutical industry has about 35% of its export revenues coming from North America, mainly the USA. Top 10 Indian companies' share in the US generics market has doubled from ~10% in FY13 to ~20% in FY18. Consolidation in US markets, greater competition and downward pricing pressures by American distributors have dampened export value in the recent past. Some of the larger emerging opportunities for Indian pharmaceutical companies are in Russia/CIS countries, Brazil and Latin America. From a market perspective, Indian pharmaceutical exports have to be broad-based in terms of markets, as well as product categories. Indian companies will need to move up the value chain from generics to Novel Chemical Entities (NCEs), which will require greater R&D expenditure. While the total R&D expenditure of the top ten Indian companies has increased at a CAGR of ~20% over FY12 – FY18, this needs to be scaled up further.

Figure 10.2: Growth of top 10 Indian Pharma Companies' R&D Expenditure (FY12 - FY18)



v. Intensifying competition in the American generics drug market:

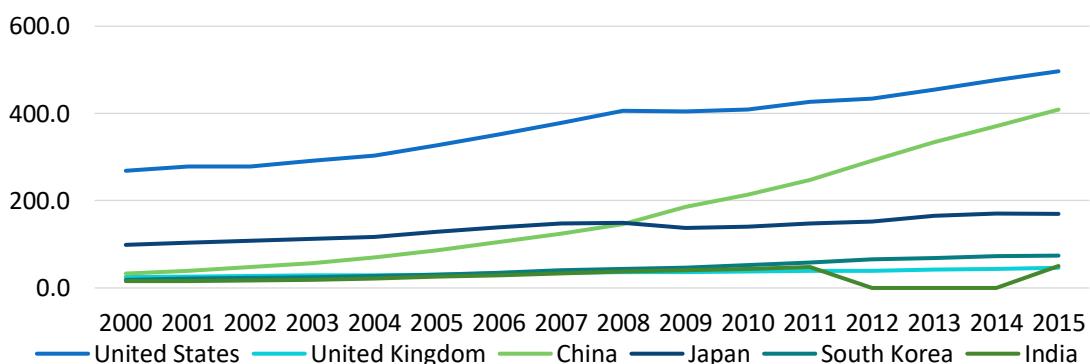
In 2018, the US Food and Drug Administration (USFDA) granted the highest number of drug approvals in its history. Overall 971 approvals were granted between FY October 17- September 18. The number was 937 during the preceding year. This can primarily be attributed to the Generic Drug User Fee Amendments (GDUFA) (first enacted in 2012) to expedite the process of approvals. However, more approvals have meant the entry of new players, and subsequently the intensification of competition in the American generics market. Higher number of approvals coupled with the consolidation of distribution channels and increased protectionism has decreased the value of new product launches and export of pharmaceuticals from India.

10.1.3 Global Best Practices

i. US

- **High R&D expenditure:** Gross expenditure in R&D totalled ~USD495 billion in 2015 (2.75% of GDP), growing at a CAGR of 3.98% between 2010 and 2015.

Figure 10.3: Gross domestic expenditure on R&D by country (2000-2015; USD billion)



Source: National Science Foundation. Data for India not available for the years 2012, 2013 and 2016

- **Prioritising and streamlining novel drug development:** The Food and Drug Administration Safety and Innovation Act of 2012 created the “breakthrough therapy” designation, which commits USFDA resources to the most promising new drugs early in the development process, to spur radical innovation.

ii. China

Crucial regulatory reform of China’s National Medical Products Administration (NMPA) has helped streamline drug registration processes and encourage innovation:

- **Streamlining clinical trial approvals:** After a clinical trial application is filed, if the NMPA or local representatives fail to raise any issues or reject the application within 60 working days, the application is deemed to be approved. Clinical trial samples can also be tested by the sponsor or an entrusted third-party testing lab, rather than having to be tested by a government accredited testing lab.
- **Inclusion of data from clinical trials undertaken outside China:** Submission conditions include clinical data having to meet NMPA standards and must include data on ethnic differences if the drug or device has never been launched in China. In practice, this means sponsors can include data derived from clinical trials outside China in regulatory submissions. It also reduces the need to undertake additional clinical trials in China after receiving approvals in elsewhere. This is expected to significantly reduce costs and clinical trial timelines for drug and device developers.
- **Market Authorisation Holder (MAH) Law:** The law allows drug innovators to hold the manufacturing license for a drug even if the manufacturing is outsourced. This supports small-scale drug innovators and reduces manufacturing overcapacity.
- **Provision of fast-track approval for drugs that meet urgent clinical need:** New drugs and devices in development which meet urgent clinical need in China can be approved for marketing if the data from early or mid-stage trials show promising clinical value. New drugs and devices being developed or financed by national research centres or which feature within national development plans will be given priority review and approval.

iii. South Korea

- **Provision of research and business development through a dedicated fund:** In 2011 a consortium of three health-related Korean Ministries – the Ministry of Science and ICT; the Ministry of Trade, Industry, and Energy; and the Ministry of Health and Welfare – established the Korea Drug Development Fund (KDDF), which provides research and business development assistance to Korean pharmaceutical companies, thereby expediting novel drug development projects.

- **Government support for development of novel drugs:** In 2018, the South Korean government earmarked ~USD 60 million to back the development of 100 novel drugs by 2026. Concurrently, the Government, along with industry players and foreign investors, is in the process of creating an R&D fund worth USD 900 million to provide financial assistance to health care startups and to initiate a technology transfer covering the entire drug development process.
- **Leveraging AI to speed up the drug discovery process:** The Korea Pharmaceutical and Bio-pharma Manufacturers Association (KPBMA) launched a joint task force to purchase an AI platform to streamline the drug discovery process and improve its efficiency. As of 2018, 18 local drug makers have collaborated on this innovation. Samsung Medical Center (SMC), in partnership with Microsoft Korea, is building an AI-based precision health care system to analyse medical data, optimise clinical decision-making and establish disease-specific prediction models.

iv. UK

- **High R&D expenditure:** Pharmaceuticals is the highest R&D spending sector in the UK, clocking an R&D expenditure as a percentage of sales of ~30% since 2007. Expenditure on R&D performed in the UK was £33.1 billion in 2016 (1.67% of GDP), reaching its highest level on record. The Government has committed to meet a target of 2.4% of GDP invested in UK R&D by 2027, and a longer-term goal of 3%.
- **Government support for development of novel drugs:** In November 2017, the Government confirmed an additional £86 million government funding to support innovators and the National Health Service (NHS) in overcoming barriers to getting new, innovative technologies to patients quickly, as part of its Accelerated Access Review programme.

10.1.4 Policy Recommendations (in order of priority)

- i. Restructure the current regulatory mechanism:²⁴
 - India needs to have a central FDA-like institution; the current structure (National Pharmaceutical Pricing Authority (NPPA), DCGI etc) has many overlaps, slowing down decision making and industry growth. The DCGI currently reports to the Joint Secretary, which is not the right level for that position. DCGI's status needs to be elevated to Additional Secretary level.
 - The Department of Pharmaceuticals (DoP) must be repurposed to support growth of the industry, and may be appropriately placed under another Ministry. Appropriate budgetary and regulatory measures should be taken to safeguard the

²⁴ Refer to Figure 10.4 for an elaboration of India's current pharmaceuticals regulatory system.

promotional mandate of the DoP. The mandate should encompass provision of capital, technological and infrastructural support. Funding for programmes that fall under the purview of the DoP should be consistent with the size and scale of the pharmaceuticals industry. Serious deliberation is required to determine the appropriate Ministry under which the DoP should be constituted – in this regard, it is important to ensure that pricing, export promotion and public health/welfare concerns are accorded comparable value by the concerned Ministry. Increased pricing control in the domestic market negatively impacts export business, since importing countries benchmark prices based on the prices in exporting countries. Thus, there is a need to maintain a balance between the interest of patients and industry.

- Appoint an empowered, independent commission on pharmaceuticals reports directly to a high-level functionary in the Government. Such a commission will enable coordination across the various ministries, labs, universities and other bodies that are currently working in silos²⁵.

ii. Encourage more Investment in R&D, and create an enabling environment for ‘Innovate in India’:

- Drive next-gen R&D to move from generic based portfolio to Specialty and New Molecular Entities (NMEs) by building new capabilities.
- Increase the number of pure sciences Master’s and PhDs at IITs, IISERs, IISC and other Tier 1 institutions to 3x. The number of students pursuing post-graduate education in Engineering outstrips those pursuing Biotechnology, Genetics, Chemistry, Statistics and Mathematics. This supply-side crunch is highly undesirable, and directly impedes the growth and competitiveness (especially when considering innovation in novel drugs) of the Indian pharmaceuticals industry.²⁶
- Build linkages between industry and academia. There is a strong need to identify at least 10 research institutions/universities, and assigning them to regions where the pharmaceutical industry is concentrated to ensure that various industry segments are connected to relevant institutions. It may also be helpful to create a short and medium-term research program for a designated region. Creation of Skill Development Centres in pharmaceuticals manufacturing clusters through PPP is one possible avenue. A dedicated funding program can also be taken up through budgetary support or through imposition of a specific cess to support such an initiative. This program will support short term and medium-term objectives through pre-identified research questions decided jointly by the research institution and the regional industry.

²⁵ Refer to Figure 10.5 for further details about the (potential) structure of this independent commission.

²⁶Please refer to Annex VII.3 for more details.

- Upgrade and build capacity at various National Institute of Pharmaceutical Education and Research (NIPERs).

iii. Include pharma products in trade negotiation strategy for Regional Comprehensive Economic Partnership (RCEP) etc.

- Seek 'Deemed Approved' Status for Manufacturing Facilities: All manufacturing facilities in India approved by the USFDA or the European Directorate for the Quality of Medicines (EDQM) be deemed approved for imports from India.
- Request Suo Moto product registration: All products that are granted marketing authorization by the USFDA or the EDQM to companies located in India be granted approval for imports from India.
- Demand market development to precede local production: Any condition related to local production should be considered only after 5 years from the date of registration.

iv. Accelerate development of API parks and implement recommendations of the Katoch Committee

v. Incentivise Chinese and Korean pharmaceutical companies to set up operations in India: Given that India's fermentation and biologics capacities are limited in comparison to those in China and South Korea, incentivising Chinese and Korean pharma companies to set up fermentation and biologics operations in partnership with Indian companies may provide a much-needed fillip to the Indian pharma industry.

vi. Simplify Approval Procedures for Clinical Trials Import/Export Materials:

- Established/accredited Clinical Research Organisations (CROs) should be permitted to take one-time clearance for import/export of clinical trial materials if the parties to the contract are the same, eliminating the need for repeated clearances from various agencies.
- Based on risk profiling, approval from a single agency should be considered, as time is crucial in obtaining and executing contracts.
- Self-approval facility should be given for established corporates based on some risk profiling and audits.

vii. Increase ease of conducting medical trials and subsequently launching drugs locally:

- At present, many companies conduct their clinical trials in India but do not launch the drug locally. Steps must be taken to ensure that companies testing drugs locally are also required to launch them locally, to ensure that Indians benefit from the drug.

viii. Become a member of PIC/S:

- GMP guidelines within PIC/S simultaneously touch regulators, industry and distributors. Accession to the PIC/S may serve as a well-structured first step in the direction of harmonizing Pharma regulations across different levels of Government.
- PIC/S membership will also likely (indirectly) increase Indian pharma's market access – by means of Mutual Recognition Agreements (MRAs), for instance.

ix. Increase the number of drug inspectors by allowing third party certification through NABCB accredited agencies, and bolster support to inspectors. This will allow for a major increase quickly and avoid the pitfalls of hiring more full time inspectors:

- The Mashelkar Committee Report (2003) recommended having the ratio of one inspector for every 50 manufacturing facilities, and one inspector for every 200 retail facilities.
- Minimal services are available to drug inspectors, and the massive shortfall in human resources has meant that those currently employed are over-burdened. An audit of Maharashtra FDA conducted by the Comptroller and Auditor General of India (CAG) in 2016 found that due to lack of adequate inspection capacities (a shortfall of 37% in the post of Drug inspectors), it allowed 25% of low-quality drugs to be sold in the market without checks, and even permitted 1,535 drug selling units, whose licences had expired, to operate.

Table 10.1: Gap in Drug Inspectors

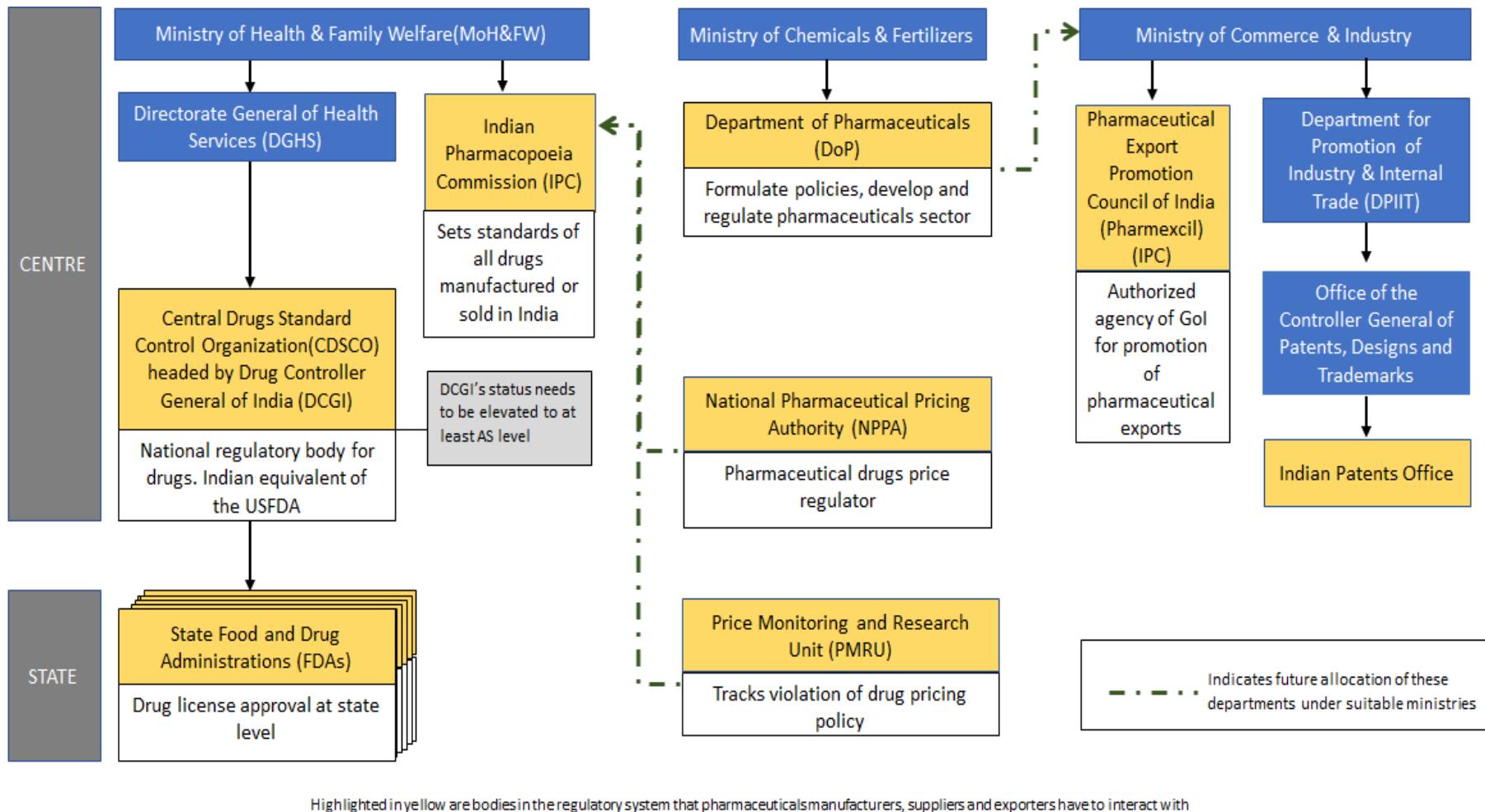
State	Total number of inspectors	No. of senior drug inspectors	No. of inspectors required
Tamil Nadu	146	14	234
Gujarat	126	42	218
Kerala	47	6	174
Maharashtra	124	N/A	432

Source: ICRIER Analysis (2015)

x. Government support to offset pricing pressure:

- Imports for DTA units against Advance Licenses should be Duty Free without any condition.
- Drawback rates should be increased from 1.5% to 4%.
- MEIS Scrip rates should be increased from 2% to 4%.
- Clinical Research Organisations (CROs) should be exempted from GST.

Figure 10.4: Current pharmaceutical regulatory ecosystem characterised by multiple ministries with less than optimal collaboration



Highlighted in yellow are bodies in the regulatory system that pharmaceuticals manufacturers, suppliers and exporters have to interact with

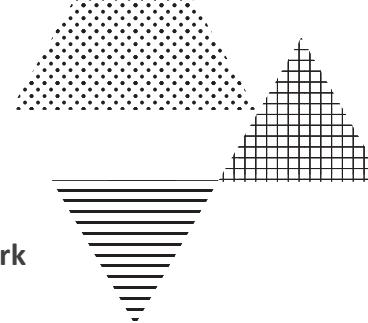
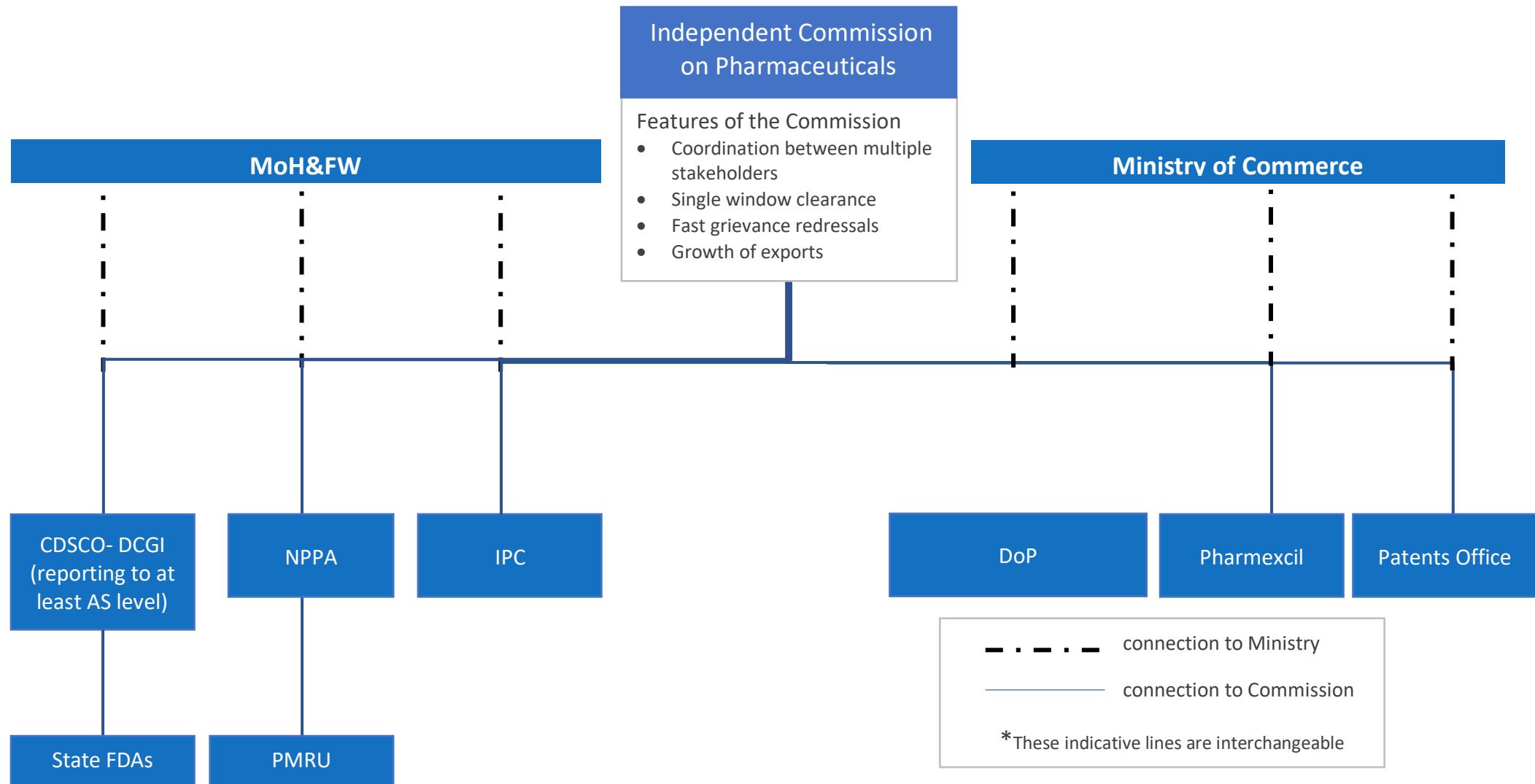


Figure 10.5: Proposed potential regulatory framework for Pharmaceuticals



BOX.10.1: FEATURES OF INDEPENDENT COMMISSION FOR PHARMACEUTICAL SECTOR

Proposed composition of the independent commission

Representation from multiple bodies (CDSCO, NPPA, IPC, DoP, Patents office etc) reporting to the commission for better coordination and subject knowledge.

Features of the independent commission

i. Coordination across multiple stakeholders:

This commission will enable coordination across various ministries, labs, universities and other bodies that are currently working in silos.

ii. Single window clearance with fast grievance redressals:

- There should be a single window portal related to drug regulation (which will include the functions of existing SUGAM portal for licenses) that would allow drug manufacturers and facilities to lodge their clearance documents online at a single point. This will avoid bureaucratic delays related to government approvals for new products.
- There should be a facility for time bound resolution of grievances related to drug regulation via this portal (similar to Ministry of Personnel, Public Grievances and Pensions' Pg Portal for public grievances).
- The timelines for processing applications by the CDSCO must be fixed. For example, in China if the National Medical Products Administration (NMPA) or local representatives fail to raise any issues or reject the application within 60 working days; the clinical trial approval application is deemed to be approved.

iii. Scaling up of existing regulatory infrastructure:

- The current regulatory system faces problems like shortage of drug inspectors causing structural delays in the approval process. In 2012, 59th Parliamentary Standing committee estimated a need for 3,200 drug inspectors, much more than the 1,349 sanctioned posts and only 846 of these sanctioned positions were actually filled. The commission should be empowered with resources to scale up the existing capacity. Inspections can be carried out with assistance of third-party inspectors in states facing acute shortage of drug inspectors until new inspectors are appointed.

iv. Formulation of guidelines for State FDAs:

- A minimum directive for state FDAs should be laid out to prevent regulatory arbitrage (as health is a concurrent list subject in schedule VII of Indian Constitution).
- A single standard application form should be used in all the states for Good manufacturing practice (GMP) violations like the USFDA Form 483. If FDA finds deviations from cGMP, it is mentioned in the Form 483 and USFDA is known for quick, satisfactory redressal of Form 483 observations

10.2 Biotechnology

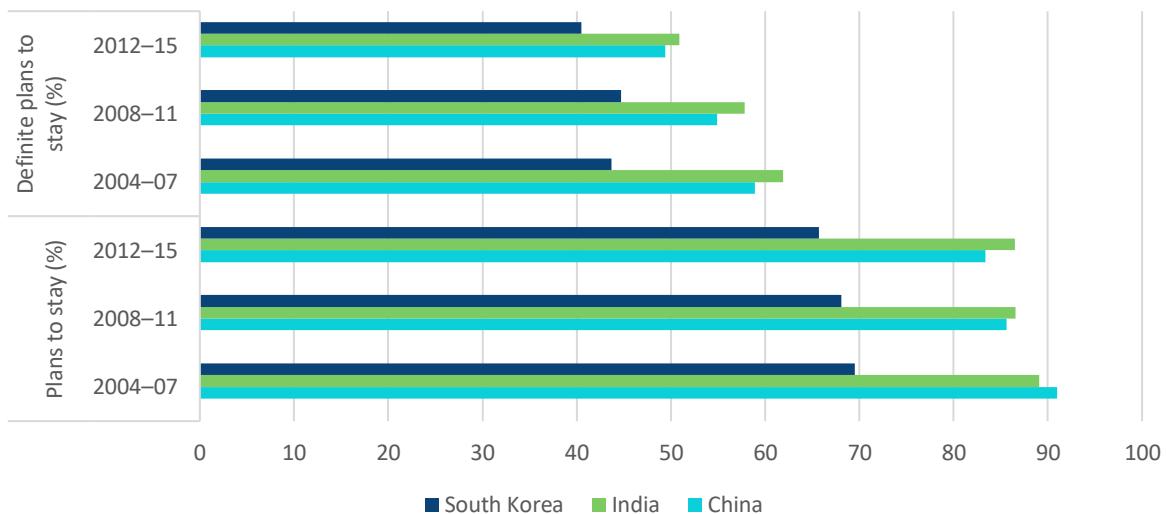
10.2.1 Global Industry Overview and India's Relative Performance

Global biotechnology market is projected to reach USD 726.8 billion by 2025, growing at a CAGR of 8.1% from 2017 to 2025. At present, US is the industry leader followed by South Korea, Germany and the United Kingdom. India is among the top 12 markets for biotechnology in the world, with ~3% share in the global biotechnology industry. It is the 3rd largest in the Asia-Pacific region. The Indian biotech industry generated a revenue of ~USD 11.6 billion in FY2017. India records the second highest number of US Food and Drug Administration (USFDA) approved plants (after the USA).

10.2.2 Key challenges faced by the Biotech Sector in India

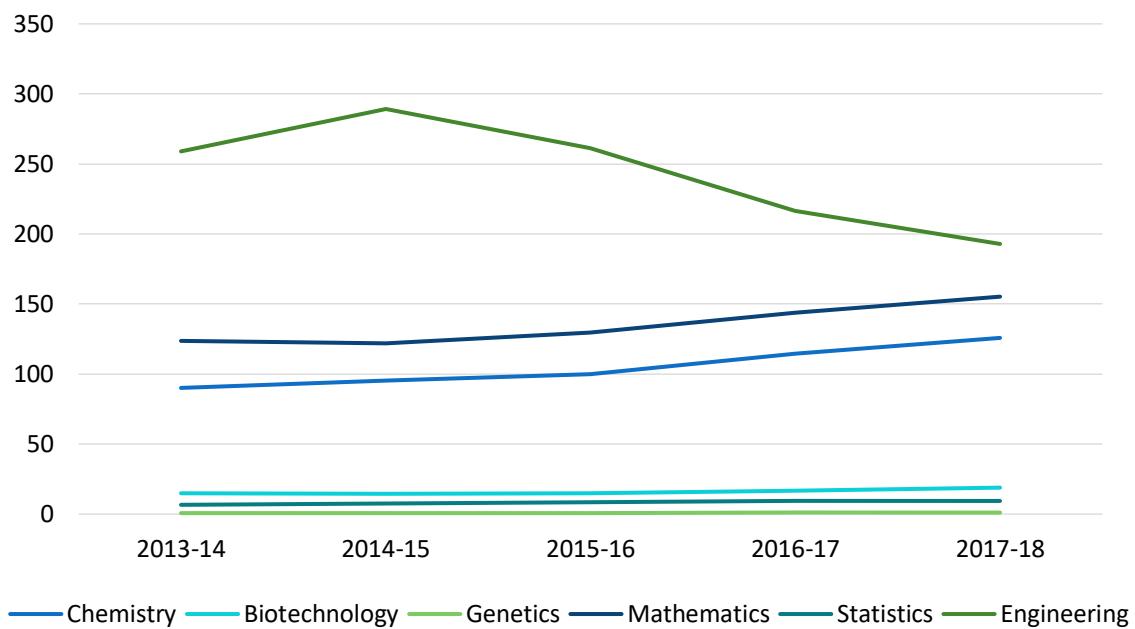
- i. Regulatory environment is excessively complicated and needs simplification:
The current Indian regulatory system is characterised by divided roles and responsibilities based on the diverse applications of biotechnology. Because biotech products touch upon legislative areas that are concurrent subjects, such as agriculture and environment, State, and at times even district, authorities can exercise significant regulatory and monitoring powers over them. At the Centre, multiple bodies simultaneously regulate the industry - Department of Biotechnology (under the Ministry of Science and Technology), Review Committee on Genetic Manipulation (RCGM), Food Safety and Standards Authority of India (FSSAI), Central Drugs Standard Control Organisation (CDSCO). At the State level, bodies from three different domains—biotechnology, environmental protection, and drug control—wield varying degrees of regulatory power, depending on the nature of a given biotech research activity or resulting products.
- ii. Absence of a conducive R&D environment that fosters development of innovative drugs:
Compared to other pharma innovation hubs (e.g., Boston/Cambridge), India lags significantly behind in incremental innovation and New Molecular Entities (NMEs) development.
 - **Shortfall in local talent pool for research:** High quality local talent has been a key driver of innovation across the world. Unfortunately, India faces a shortfall of appropriate talent, largely because the cream of Science and Engineering (S&E) students go abroad to pursue higher education (Master's and PhDs), and eventually find employment in those countries. In the US, for instance, the 5-year and 10-year stay rate reported by Chinese (85% and 90%, respectively) and Indian (83% and 85%, respectively) doctoral students was the highest.

Figure 10.6: Plans of foreign recipients of US S&E doctorates to stay in the US (2004-2014, %)



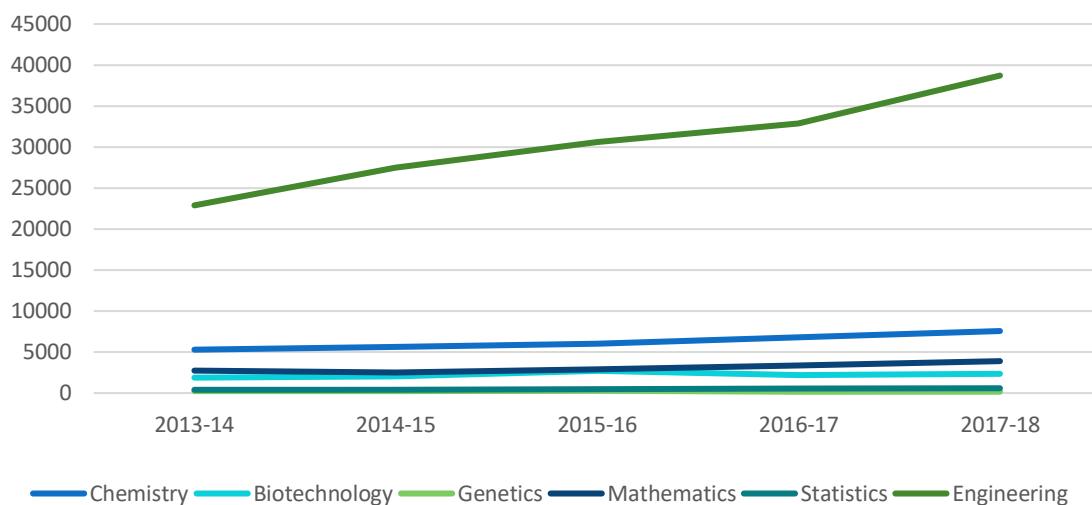
Source: National Science Foundation (2018)

Figure 10.7: All India Postgraduate Enrolment by Discipline (2013-2018, in thousands)



Source: All India Survey on Higher Education (2013-14 to 2017-18)

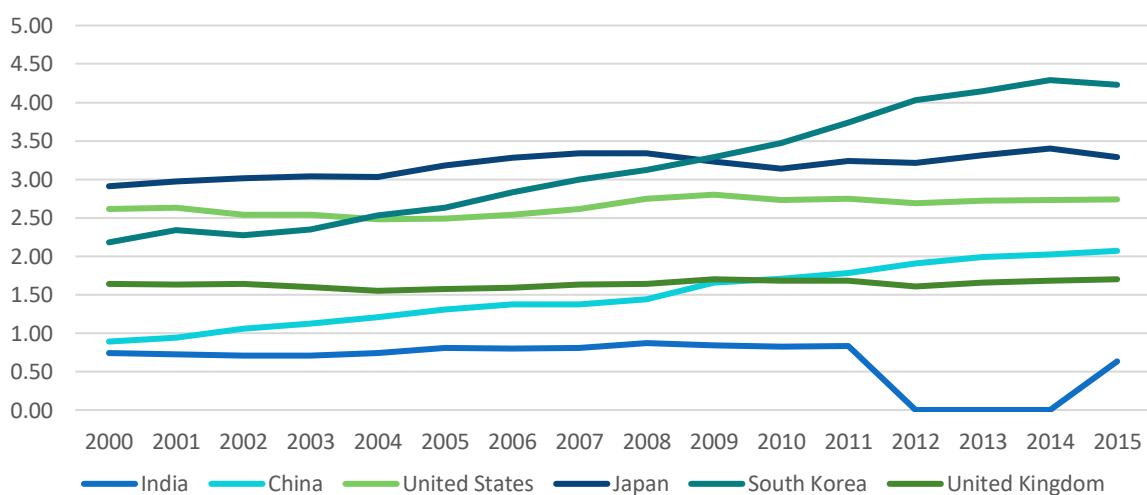
Figure 10.8: All India PhD Enrolment by Discipline (2013-2018, actual numbers)



Source: All India Survey on Higher Education (2013-14 to 2017-18)

- Inadequate funding support for R&D – this is constrained from a number of angles:** Average industry funding continues to be <10% (compared to 15-20% for most large innovators globally). The problem is exacerbated by limited VC/PE investment in the space, which is a key driver for R&D in developed markets. This is particularly problematic in the case of 2nd and 3rd round of funding, when innovators need capital to develop prototypes or perform field/trial of the molecule/product or technology. The Government needs to spend at least 2-3% of GDP on Science and Research as against 0.69% at present (China's R&D spending was 2.1% of GDP in 2016). The base effect also kicks in here – 2% of China's GDP (USD 11.9 trillion) vs. 0.69 of India's GDP (USD 2.2 trillion).

Figure 10.9: Gross Domestic Expenditure on R&D, as a % of GDP (2000-2015)



Source: Science and Engineering Indicators, 2018; National Science Foundation

Note: Data for India not available for the years 2012, 2013 and 2014.

iii. Genomics, the most promising area of biotechnology, is yet to receive adequate industry backing, especially from the large and established pharma and biotech players:

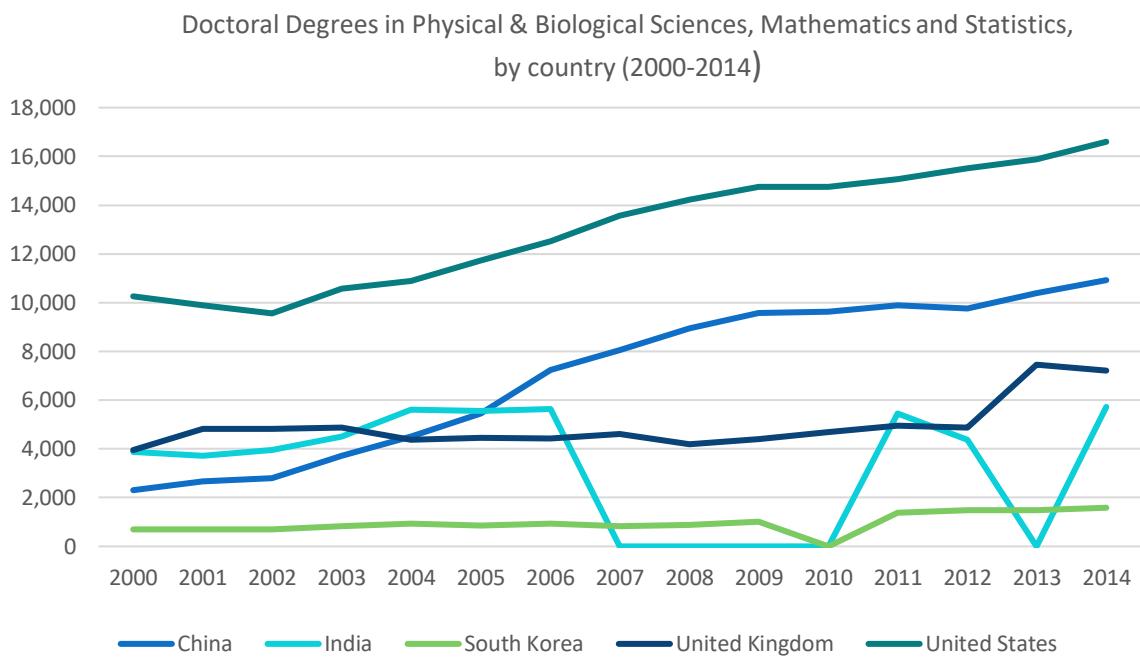
The market for genomics-based diagnostics tools and testing solutions (cancer mapping, liquid biopsy, parental screening, etc.) in India was valued at USD 10 million during 2017 and expected to reach USD100 million by 2019.

10.2.3 Global Best Practices

i. US

- **Patent-driven innovation:** Patent-driven innovation remains the US's fountainhead for job creation, productivity, and a rising quality of life. Nearly half of US GDP since World War II has been derived from patent-reliant technology. IP-intensive industries employ more than 40 million workers and generate USD 7.7 trillion in gross output (nearly 33% of the total). In 2011, to help solve three overarching problems plaguing the patent system — backlog, delay, and lawsuit abuse — Congress passed the America Invents Act. The law increased the number of US Patent and Trademark Office (USPTO) satellite offices to speed processing. It replaced a “first to invent” standard with one favouring the “first inventor to file” to cut down on litigation and harmonise the US approach with global standards. A Patent Trial and Appeal Board was established to provide a “Post Grant Review” process to facilitate speedier dispute resolution. The law also expanded the universe of what constitutes “prior art,” rendering more claims unpatentable for lack of novelty.
- **Focus on STEM disciplines:** The number of S&E doctorates conferred annually by US universities increased from nearly 28,000 in 2000 to 45,000 in 2015. US citizens and permanent residents as well as temporary visa holders have contributed to this growth. As per data from the National Center for Science and Engineering Statistics, Chinese citizens were the largest recipients of US S&E doctorates 2015 (22.4%), followed by Indians (16.2%). Moreover, between 2012 and 2015, the vast majority of US S&E doctorate recipients from China and India reported plans to stay in the US, and approximately half of these individuals reported accepting firm offers for employment or postdoc research in the United States. US S&E doctorate recipients from Japan, South Korea, and Taiwan were less likely than those from China and India to stay in the US.

Figure 10.10: Doctoral Degrees in Physical & Biological Sciences, Mathematics and Statistics, by country (2000-2014)



Source: Science and Engineering Indicators, 2018; National Science Foundation

Note: Data for India not available for the years 2007, 2008, 2009, 2010 and 2013.

ii. China

In 2011, China named biomedicine one of its seven strategic priorities and in its 13th Five- Year Plan (2015–2020), the Government mandated that biotechnology should exceed 4% of GDP by 2020 in market size. According to Frost & Sullivan, China's biologic drugs market expanded from USD 9.13 billion in 2012 to USD 22.13 billion in 2016, an annual growth rate of 25%, ranking China as the world's fastest-growing biologics market. Frost & Sullivan forecasts the market's total value at USD 47.45 billion by 2021. The following factors have facilitated the rapid growth of the Chinese biotech industry over a short period of time:

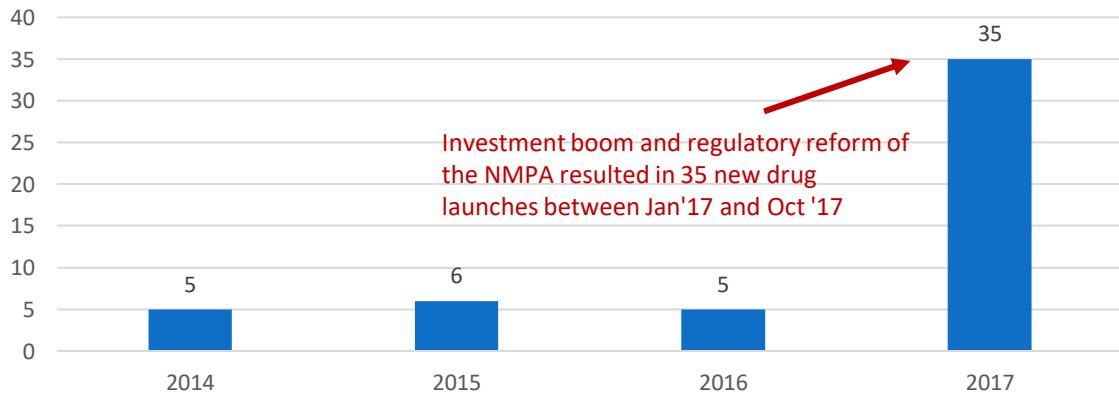
- **Large scale foreign acquisitions:** While Chinese government capital controls and greater scrutiny of overseas mergers and acquisitions (M&A) have impacted Chinese M&A growth, investment in biotech receives full government support as it falls into the politically important category of "high-tech and advanced manufacturing investment, overseas R&D centers". Outbound Chinese M&A in biopharmaceuticals reached USD 3.9 billion in 2017, the bulk targeting US companies. According to the Financial Times, Chinese Venture Capital/Private Equity (VC/PE) invested USD 5.1 billion in US biotech in the first half of 2018.
- **Reform of the National Medical Products Administration (NMPA):** Three key reforms took place in 2015 that were transformative for China's biotech industry. First, the introduction of self-checking declarations by drug companies in clinical

trials freed up the NMPA trial pipeline and NMPA resources by eliminating non-starter cases awaiting approval. Second, new NMPA regulation (modeled after the USFDA's regulatory process) requires Chinese generic drug makers to establish consistent bioequivalence with the innovator product. Third, the Market Authorisation Holder (MAH) Law allows drug innovators to hold the manufacturing license for a drug even if the manufacturing is outsourced. This supports small-scale drug innovators and reduces manufacturing overcapacity.

- **Incentivising the return of Chinese students and professionals working abroad:** China's search for biotech expertise has not only targeted MNCs but also the large pool of Chinese PhD researchers working at post-graduate research institutes and foreign companies. Chinese students in the US make up the largest foreign student group at almost one-third of the foreign student population. Most study Chemistry and Engineering. Since 2012, ~250,000 of the 2 million returnees, known as "sea turtles" (*haigui*), are estimated to be working in China's life sciences industry. China's "Thousand Talents Plan" designed to recruit overseas talent, confers prestige, attractive remuneration and career enhancement opportunities to researchers or employees poached from high-profile overseas R&D institutions and companies. Significantly, many Chinese biomedic professionals have migrated to Chinese start-ups from MNCs, another channel of technology transfer.

Figure 10.11: Number of new launches of Chinese biodrugs by registration year

Number of new launches of Chinese biodrugs by registration year



Source: UBS, 2018

iii. South Korea

South Korea has made significant progress in biotechnology – from having a negligibly small biotech industry in the 1990s, it has since grown to become one of the world's largest biotech players. The South Korean government envisions expanding the country's presence in the global biotech market from its current 1.7% to 5% by 2025

and adding 120,000 new biotech jobs by 2025. There are several best practices that can be borrowed from their development experience:

- **Strong commitment to higher education:** South Korea has not only placed a significant policy emphasis on education, but has also channeled students into biotech/pharma related degrees – research personnel in the South Korean biotech industry increased by 30% over 2011-16. This is a fundamental driver to ensuring the growth of the biotech industry in South Korea, and has created a competitive advantage that few other countries can match.
- **Regulatory and strategic government support:** In the 1980s, South Korea identified biotechnology as a key driver of economic growth: following that, a multitude of targeted policy initiatives were passed: the Genetic Engineering Promotion Law (1983); Biologics Basic Plan (1994) amongst many others – such policies increased exposure to biotechnology and made it a clear area of priority for the South Korean private sector, spurring further biotech-related growth.
- **Financial support from the government:** In 2016, the South Korean government committed USD 9 billion in R&D funds for private sector companies to develop new drugs; the Government has also established a USD 101 million fund for venture firms and start-ups. Additionally, since 1990, government investment in biotech has been increasing at an average annual rate of 24%.

iv. UK

- **High R&D expenditure:** Latest figures from 2017 show that the total spend on UK R&D by UK businesses was £23.7 billion. Of this, life-sciences continues to be the largest contributor at 18% of the UK total, spending over £4 billion in R&D.
- **Government support for R&D:** In 2017, as part of its Lifesciences Industrial Strategy, the government announced £500 million of government support for major new research programmes and over £1 billion of new industry investment.
- **Emphasis on Genomics:** In 2017, the government committed to investing £85 million in UK Biobank, a not-for-profit research organization that specialises in research on genomics. In 2018, the government announced plans to sequence one million whole genomes by 2023, with a broader aspiration of reaching five million genomic analyses in the same timeframe.

10.2.4 Policy Recommendations (in order of priority)

- i. Need to restructure the current regulatory mechanism:²⁷
 - India should have a central FDA-like institution, empowered to oversee the biotech industry, as is the case in the US, China, South Korea and Germany.

²⁷ Refer to Figure 10.12 for an elaboration of India's current biotech regulatory system.

- Appoint an empowered independent commission on biotech that reports directly to a high-level functionary within the Government. Such a commission will enable coordination across the 8 ministries, labs, universities and other bodies that are currently working in silos;²⁸
- Ensure clearer delineation of authority between central and state bodies; ensure only central bodies manage drug approvals and licensing;
- DCGI status should be elevated to at least the Additional Secretary level (it currently reports to the Joint Secretary);
- Streamline RCGM and Genetic Engineering Appraisal Committee (GEAC) to expedite drug approvals; and
- Undertake training and capacity building of various stakeholders.
 - For companies: Indian companies are not well-versed in the protocol that must be followed while submitting proposals. India should institute a training program for biotech companies, similar to the USFDA's, to ensure that the proposals submitted meet appropriate quality and regulatory standards.
 - For committee members: Members of committees like the RCGM and the GEAC are academics, who don't necessarily understand the nuances of what constitutes good regulation. The Committees, in order to avoid conflict of interests, do not often appoint practitioners. As such it is imperative to train the members of such committees in regulatory protocol to ensure their smooth and efficient functioning.

ii. Increase investment in R&D:

- Improve industry-academia R&D collaboration: Creating a 10 year plan/roadmap will enable greater coordination across organisations and educational institutions;
- Increase the number of pure sciences Master's and PhDs at IITs, IISERs, IISc and other Tier 1 institutions to 3x. The number of students pursuing post-graduate education in Engineering outstrips those pursuing Biotechnology, Genetics, Chemistry, Statistics and Mathematics. This supply side crunch is highly undesirable, and directly impedes the growth and competitiveness (especially when considering innovation in novel biologics) of the Indian biotech industry;²⁹
- Upgrade and build capacity at various National Institute for Pharmaceutical Education and Research (NIPERs);
- Create INR 1,000 crore fund, specifically for biotech product development, that targets 2nd and 3rd rounds of funding. The Biotechnology Industry Research Assistance Council (BIRAC) should be the governing body of this fund. BIRAC is a public sector enterprise set up by the DBT to stimulate, foster and enhance

²⁸ Refer to Figure 10.13 for further details about the (potential) structure of this independent commission.

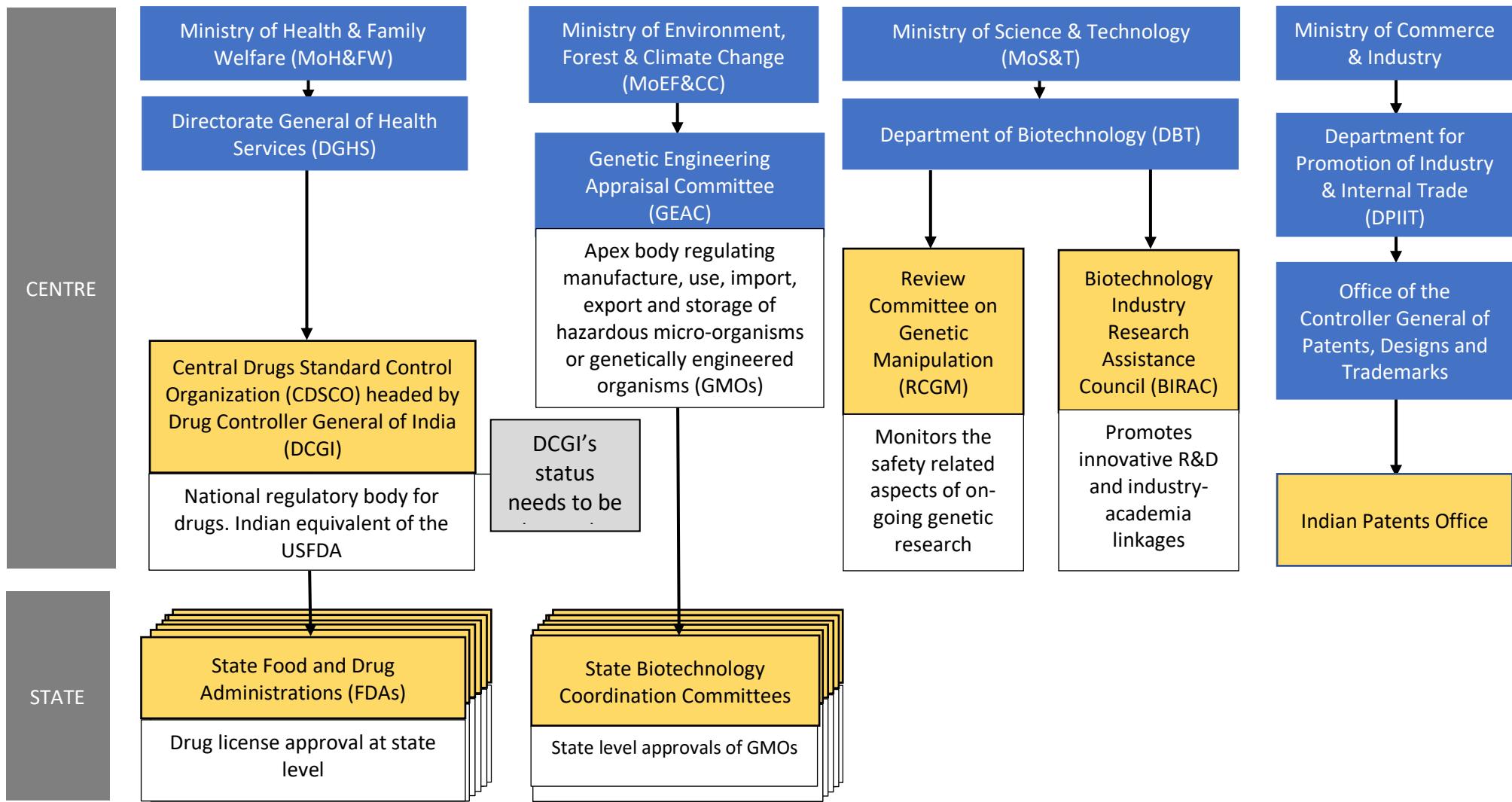
²⁹ Refer to Annex VII.3 for more details.

research and innovation capabilities, and capacity of the Indian biotech industry, particularly start-ups and SMEs.

iii. Increase market access for Indian biotech in trade negotiations:

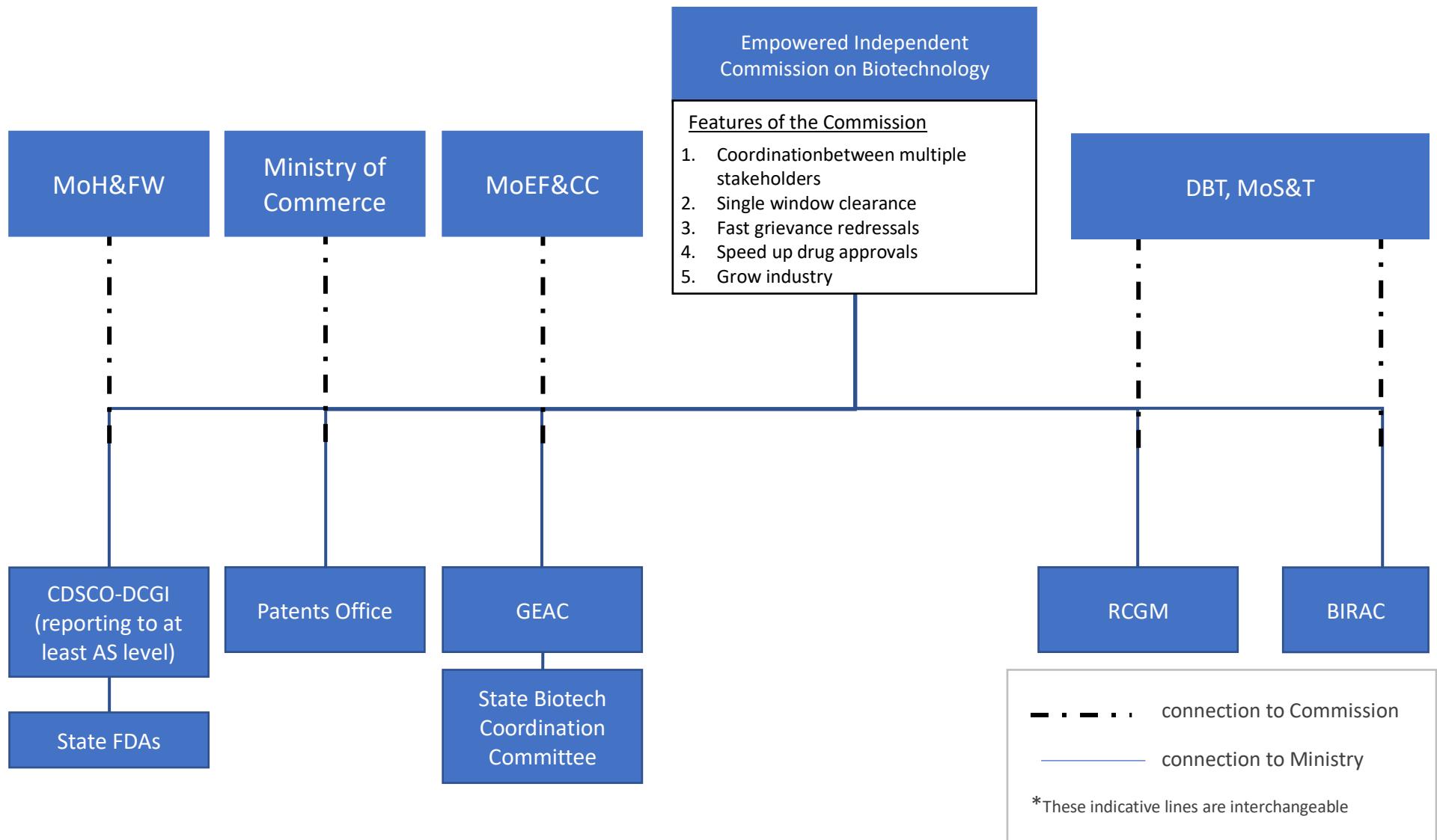
- Currently, in trade negotiations with all countries, India uniformly demands ease of product approvals, reduction in registration time and requests non-discriminatory treatment. India's negotiation pitch should instead be linked to industry needs and quicker outcomes:
 - Seek 'Deemed Approved' Status for Manufacturing Facilities: All manufacturing facilities in India approved by the USFDA or the European Directorate for the Quality of Medicines and Healthcare (EDQM) be deemed approved for imports from India.
 - Request *Suo Moto* product registration: All products that are granted marketing authorization by the USFDA or the EDQM to companies located in India be granted approval for imports from India

Figure 10.12: Current biotech regulatory ecosystem characterised by multiple ministries and departments with insufficient coordination



Highlighted in yellow are bodies in the regulatory system that biotechnology manufacturers, suppliers and exporters have to interact with

Figure 10.13: Proposed potential regulatory framework for Biotechnology



BOX 10.2: FEATURES OF INDEPENDENT COMMISSION FOR BIOTECHNOLOGY SECTOR

Proposed composition of the independent commission

Representation from multiple bodies (CDSCO, NPPA, IPC, DoP, Patents office etc) reporting to the commission for better coordination and subject knowledge.

Features of the independent commission

i. **Coordination across multiple stakeholders:**

This commission will enable coordination across various ministries, labs, universities and other bodies that are currently working in silos.

ii. **Single window clearance with fast grievance redressals:**

- There should be a single window portal related to drug regulation (which will include the functions of existing SUGAM portal for licenses) that would allow drug manufacturers and facilities to lodge their clearance documents online at a single point. This will avoid bureaucratic delays related to government approvals for new products.
- There should be a facility for time bound resolution of grievances related to drug regulation via this portal (similar to Ministry of Personnel, Public Grievances and Pensions' PgPortal for public grievances).
- The timelines for processing applications by the CDSCO must be fixed. For example, in China if the National Medical Products Administration (NMPA) or local representatives fail to raise any issues or reject the application within 60 working days; the clinical trial approval application is deemed to be approved.

iii. **Scaling up of existing regulatory infrastructure:**

- The current regulatory system faces problems like shortage of drug inspectors causing structural delays in the approval process. In 2012, 59th Parliamentary Standing committee estimated a need for 3,200 drug inspectors, much more than the 1,349 sanctioned posts and only 846 of these sanctioned positions were actually filled. The commission should be empowered with resources to scale up the existing capacity. Inspections can be carried out with assistance of third-party inspectors in states facing acute shortage of drug inspectors until new inspectors are appointed.

iv. **Formulation of guidelines for State FDAs:**

- A minimum directive for state FDAs should be laid out to prevent regulatory arbitrage (as health is a concurrent list subject in schedule VII of Indian Constitution).
- A single standard application form should be used in all the states for Good

10.3 Textiles

10.3.1 Global Industry Overview and India's Relative Performance

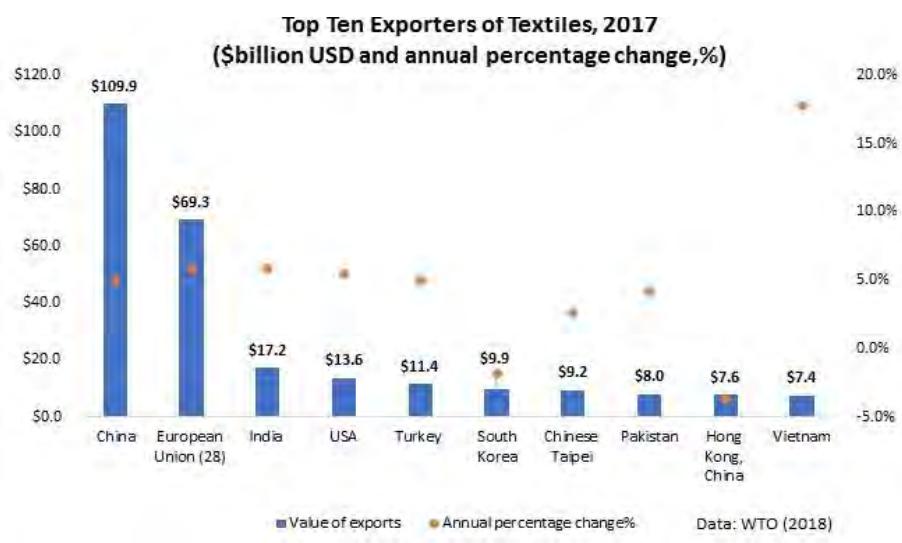
The value of the global textile market totaled USD 667.5 billion in 2015 (around 83.1% were fabrics and 16.9% were yarns), up 1.5% from a year earlier. The CAGR of the market was 4.4% between 2011-15. Asia-Pacific accounted for 54.6% of the global textile mills market value in 2015 and Europe accounted for a further 20.6% of the market. Of the overall global textiles market, textiles exports totalled about USD 296 billion in 2018. Textile is one India's largest and oldest industries – latest estimates put India's overall textile exports at USD 17 billion (for FY17-18). India is the third largest exporter of textiles, falling distantly behind China and the European Union (EU). India is the largest producer of cotton & jute worldwide and the second largest producer of polyester, silk & fiber – these are market positions that India can seek to strengthen and defend in the coming years. This is a particularly attractive area of opportunity because Indian exporters presently face a combined disadvantage of over 19% of cost in comparison to their competitors (who face lower tariffs in major markets and benefit from subsidies provided by their governments).

Table 10.2: India's Textiles Exports (USD billion)

Commodity	2015-16	2016-17	2017-18	% Change 2018/2017
Textiles	19	19	20	4.4
Cotton Textiles	10	10	10	0.2
Cotton Yarn	3	3	3	2.2
Cotton Fabrics	2	2	2	5.6
Cotton Made-Ups	5	5	5	-3.2

Source: Cotton Textiles Export Promotion Council (2017)

Figure 10.14: Top Ten Exporters of Textiles, 2017 (billion USD & annual percentage change, %)



According to the Ministry of Textiles, with the correct policy instruments, India can be in a position to achieve 20% growth in exports each year until 2025, though this is a very aggressive target and requires many changes. Consequently, India can be expected to export approximately USD 300 billion of textiles by 2024-25 – resulting in a tripling of Indian market share from 5% to 15%.

From an employment standpoint, textiles is the second largest generator of jobs in India. It is anticipated that the total number of jobs in textiles will increase from 45 million in FY2017-18 to 55 million by 2020. Growth of Indian textiles exports will also have a positive impact on incomes of cotton farmers, since the supply chain of textiles has strong links with agriculture. India is the second largest exporter of cotton in the world. Indian cotton prices have a close link with and mirror international prices, unless the Government puts a partial ban on exports in certain years in order to ensure adequate availability of cotton in the domestic market. Larger textile exports, especially cotton yarn and fabrics may lead to larger cotton production, but cotton pricing will have to be calibrated carefully to ensure farmers' income also increases.

10.3.2 Key Challenges Faced by the Textiles Industry in India

- i. Industry fragmentation, upskilling existing labour, creating productive manpower and mechanising the supply chain:
 - At present, the textile sub-sectors of yarn, made-ups and fabrics are largely fragmented (with the exception of a few major players) and do not have the requisite scale for success in global markets.
 - To achieve the envisaged production capacities (i.e., exports of ~USD 300 billion of textiles by 2024-25), approximately 35 million additional textiles workers are needed.
 - Recent initiatives on skill development led by the Textile Skill Sector Council needs to be scaled up dramatically, with the objective being to reach per man, per machine output equivalent to that of China.
 - India is highly competitive in yarn production, as yarn production is mechanised, but not in other textiles which account for 93% of employment in the unorganised sector. Mechanisation of other parts of the supply chain, especially MSMEs and firms in the unorganised sector, would be required to infuse higher competitiveness over time.
 - One of the biggest shortcomings of the Indian textiles sector is the obsolescence of its weaving and processing sub-sectors. While shuttle looms have almost completely been phased out in major textile exporting countries, making room for shuttle-less looms (rapier, airjet, waterjet, etc), India's textile industry still relies, to a great extent, on old shuttle looms in the unorganized powerloom sector which produce poorer quality fabrics (the integrated mills have, however, invested in shuttle-less looms). This is borne out by statistics

put out by the Textile Commissioner's office, and a status report of the National Productivity Council prepared for the Ministry of Textiles about the offtake of subsidies for the import of second-hand shuttle-less looms under the Textiles Upgradation Funds Scheme (TUFS)

- That modern shuttle-less looms require very few people to attend to them, and therefore are unlikely to create large employment opportunities by themselves is another factor that warrants consideration; for instance, 12 rapier looms are attended to by 1 worker in a Coimbatore mill. In China, in the more modern mills, one worker attends to 40 mills
- In the processing sub-sector, while many integrated mills have their own modern in-house processing facilities, India's powerloom sector, which produces the bulk of fabrics in the country, is still dependent on obsolete, stand-alone processing units that face quality and environmental issues alike
- Thus, the primary issue is that unless huge investments are made by the private sector in modernising the weaving and processing sub-sectors (in concomitance with capital subsidies like TUFS and interest subvention by the Government), India is unlikely to obtain the 20% per annum growth target till 2025 cited earlier in this report. A large part of the industry feels that with rising wages in India, along with high electricity and transportation costs, as well as the huge capacities created by China in textiles, it is not worth investing in textiles for the export market. The Government and private sector will need to work together to overcome this. A China + 1 strategy could be implemented to get additional textile manufacturing into India

ii. Need to address key areas of costs and constraints that adversely affect Indian textiles' competitiveness:

- Raw material cost is significant for all three parts of the textiles supply chain. For yarn and fabrics, power and overheads including transport costs are high, while labour is a major cost item for made-ups.
- Exports of all segments of textiles are affected by delays due to processes and logistics. These delays at times are more than four times the number of days required for turnaround from order to delivery in India, compared to China or Turkey.
- The productivity of Indian labour is low, and thus productivity-adjusted wages are higher in India than, for instance, in Viet Nam.
- As a result of a FTA, Viet Nam will soon have zero tariffs in EU and a number of other large economies.
- Many local producers (esp. in Bhilwara, India's largest textiles cluster) are being charged extremely high rates for electricity, a problem which could impede further investment in the industry.

Table 10.3: India- Percentage Cost Structure of the Yarn, Fabric and Made-ups Industry

Product	Raw Material	Labour Cost	Power Cost	Overheads (incl. transport costs)	Other costs
Yarn	63.3	9.5	11.5	13.3	2.4
Fabric	62	14.5	6.5	16.5	0.5
Made-ups	60	23	7.25	2.25	7.5

Source: Primary data from exporters based on interviews; verified with experts and other stakeholders.

iii. Operational issues in the implementation of the Textiles Upgradation Funds Scheme (TUFS):

TUFS was introduced by the Government of India in 1999 to facilitate new and appropriate technology for making the textile industry globally competitive and to reduce the capital cost for the textile industry. A sum of INR 21,347 crore has been provided as assistance to the industry between 1999 and 2015. It has enabled investments worth INR 2,71,480 crore, and created jobs for nearly 48 lakh people.

However, the subsidy suffers from major operational issues:

- 8,160 companies have filed applications seeking benefits under TUFS since 2016, however, the government had issued ID numbers only to 6,400 projects, as of November, 2018.
- Additionally, out of the annual budgetary allocations of INR 23 billion and claims sought for INR 18 billion, the government had only released INR 3.5 billion as of November, 2018 (~18%).
- Additionally, filing for the funding itself is hard: overseas machinery suppliers should be enlisted in the suppliers' list, and the government is requesting documents like the ISO to validate this – which some suppliers are reluctant to do.
- K. Selvaraju, the chairperson of the Southern India Mills' Association, said that '...because of this massive fund blockage with the government, many units are facing financial strain for the purchase of raw material to feed their plants. Since the funds were intended to be released quickly, companies took loans from financial institutions, on which they are now paying interest. So it is a double blow for the entire textiles sector.'

iv. Inability of Textile Parks to attract investment:

The Scheme for Integrated Textile Parks (SITP) was launched in 2005 to provide the textiles industry with state of the art facilities in which to set up their textile units. India currently has 74 parks in place.

Operationally, the textiles parks have not yet been successful in driving additional investment. The reasons for this become apparent when Indian textiles parks are benchmarked against their international peers:

- Internationally, park size is rarely less than 100 acres. However, in India, several approved parks are smaller than 25 acres.
- In India, only two parks have a fully integrated value chain present; most others only contain 1-2 steps of the value chain. Internationally, the majority of parks

- provide access to facilities enabling all steps of the value chain, and also provide support services around a single product category (socks, sweaters etc.).
- The main way international textiles parks attract investors is by providing marketing/market entry support; the SITP does not contain any such support whatsoever.

v. Product Branding and Certification:

The Ministry of Textiles currently issues Handloom, Cottage Industry, or Industrial craft certificates after conducting limited inspection to ensure the authenticity of origin. However, this is currently only used to enable the countries purchasing the products to avail of duty concessions. This is not currently used as a mechanism to increase awareness of and boost trade in handloom products.

10.3.3 Global Best Practices

i. China

- **Shift from low value added to high value added:** As China is losing some of its global textile and apparel market share (largely due to a slowdown in industrial growth and declining overseas orders to labour), it is already shifting to more value-added products, namely technical textiles. In this endeavour, the Chinese textile industry has committed to improving basic R&D projects and to bolstering technical innovations. Per latest estimates available for H1 2017, Chinese industrial textile exports reached RMB 12 billion, registering a YoY increase of 2.49%. The US and EU were the largest export destinations.
- **Prioritising the textiles industry in national plans:** In October 2015, China's 18th Party Congress unveiled the 13th Five Year Plan (2016-2020), in which it identified textiles as one of several priority industries. The Plan lays out the following guiding principles for the textiles industry:
 - Transform government duties. Further simplify customs clearance, exchange settlement, and other administrative procedures. Advance administrative streamlining and decentralisation. Clean up unreasonable fee collection in commerce channels;
 - Intensify fiscal and financial support;
 - Further improve policies to regulate and control cotton;
 - Expand application of industrial-use textiles;
 - Strengthen talent and training, upgradation of skills and linking up of institutions and enterprises to improve skills;
 - Propel optimisation and upgrading of clusters, and strengthen the coordinated development of large, medium-sized, and small enterprises within these clusters;
 - Accelerate enterprise technological renovation and link the producers to new technologies and service platforms that use such technologies;

- Develop and popularise advanced green manufacturing technologies; and
- Utilise eastern region's location and its role as industry leader.

ii. European Union

- **Emphasis on skilling and upskilling:** Given that the EU's textile industry is dominated by MSMEs, recruiting skilled staff and upskilling existing employees poses a huge problem. To address this bottleneck, the Erasmus+ Programme of the EU has co-founded the TEXAPP Project, which aims to strengthen the supply of apprenticeships for MSMEs active in the sector through the close cooperation between EURATEX (as the European organisation of the Textile and Clothing national associations) and its partners. TEXAPP project also provides bespoke, targeted tools for pooling resources, sharing information, exchanging knowledge, developing ideas for MSMEs.
- **Proactive foreign policy and FTAs:** The increasing importance of markets in emerging economies and the development of new uses and textile applications in areas such as aerospace, medicine, construction and architecture, automobile, transport and personal protection, makes the need for better access to non-EU markets crucial. As such, the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs actively coordinates and organises regulatory and industrial policy dialogues with many of the EU's strategic partners, including but not limited to, the US, India, China, Japan etc.

10.3.4 Policy Recommendations (in order of priority)

- i. Drive scale across the textiles value chain by encouraging emergence of large investment, consolidation of firms, and enlargement of clusters:
 - Encourage emergence of larger companies which can invest in new technologies.
 - To encourage the consolidation of firms, it may be beneficial to introduce a limited-period ~15% investment allowance across the value chain. In the short-term, this will enable firms to achieve economies of scale and stimulate overall investments.
 - Focus efforts to attract top 10 global textile companies (including those from China) to set up large-scale plants in India.
- ii. Increase confidence in labour force protections
 - At present, concerns regarding the ethical use of labour (e.g. child labour, trafficked labour) are preventing some firms from using Indian textiles – the discovery that a company's products were made using unsafe and unethical labour would be detrimental to that company's brand and image. To assuage these concerns, there should be a strengthening of the accreditation bodies used to certify labour, and an explicit marketing/branding initiative to show that Indian labour meets the highest standards of ethics and safety.

iii. Improve existing incentives to upgrade textiles technology and improve global competitiveness:

Indian textiles companies do not have the high-quality machinery that key competitors have due to significant machinery import duties and general high cost of purchasing. The Amended Technology Upgradation Fund Scheme (ATUFS) provides the right incentives to companies to purchase these products, however, it is not being implemented correctly. The committed liability and non-release of TUFS subsidies is causing liquidity issues for companies. As of December, 2018, there were 9,303 affected cases and approximately INR 6,000 crores in subsidy blocked.

- To resolve this, the Ministry of Textiles may develop a system and advise financial institutions to upload online the committed liabilities and final claims.
- Ministry of Textiles may list the pending cases on daily basis and place on website so that the mills can follow up. A digital system will ensure that the support is provided in a time bound manner.

The Export Promotion Capital Goods (EPCG) scheme will have to be amended due to the WTO requirement. The EPCG should be converted into a general scheme for textiles as a whole, providing duty free access to the machinery which is part of the list which is supported at present under EPCG and ATUFS schemes.

iv. Enhance ease of lending and increase credit for tech upgradation:

- There is a need to improve ease of lending through financial reforms and providing faster clearances with special focus on MSME sector.
- Increase in interest rebate for exporters and promotion of initiatives like loan of INR 1 crore in 59 minutes for MSMEs will increase availability of credit.

v. Expedite improvements in infrastructure to make the supply chain more efficient:

While much improvement has been made on this front, more needs to be done. For instance, Indian exporters on average took nearly four times the time taken by Chinese exporters to meet border compliance requirements in 2017. To optimise the export delivery chain following measures are needed:

- Digitization across ports and moving of processes online;
- Fast tracked factory to ship movements with swift port clearances;
- Improved connectivity to industrial clusters;
- Capacity building in warehousing infrastructure for MSME exporters to store and sell leading to better returns;
- Utility Reforms like making power available at uniform prices for the manufacturing sector. This should be accompanied by development of common cluster infrastructure like Effluent Treatment Plants (ETPs) and Captive Power Plants (CPPs) on Public Private Partnership (PPP) model to cut down costs further.

vi. Tax Reforms and Concessions:

- There should be tax equality across the value chain from raw materials to intermediate and onto finished products. This will end the accumulation of unadjusted Input Tax Credits (ITC). Lack of such equality has led to inverted duty structures in polyester yarns and fabrics, hurting trade deficits.
- Exemptions can be provided in toll taxes for export goods to make them cheaper.

vii. Undertake aggressive marketing of India's textiles expertise:

By some indications, the problem that India currently faces is simply that many textiles exporters do not know about India's expertise in textiles. Barring small average factory size (driven by labour laws), India has generally come up to speed on quality of product, safety of manufacturing process etc.

- The Indian government needs to enter into negotiations with bulk buyers of textiles (e.g. Marks & Spencers, Mother Care) to start the process; after establishing them as our leading customers, other companies will likely start to manufacture in India.
- Efforts can also be undertaken to encourage international textile firms, including the Chinese, to come to India – by starting negotiations along these lines, India can significantly boost its prominence in the global textiles industry.

10.4 Garments/Apparel

10.4.1 Global Industry Overview and India's Relative Performance

Global apparel trade reached USD 470 billion in 2017, and is expected to grow at a CAGR of ~5% over the next five years (i.e. until 2023). The key drivers of this growth are increases in disposable income (doubled in China: 2010-14) and urbanisation in developing economies (1.8% - overall urban growth rate). Overall, the garments/apparel space is significantly more labour intensive/less technology-dependent than textiles (garments require unique designs for each product – it is often impractical to automate the process of producing thousands of unique garments). The impacts of this are two-fold:

First, the garments sector is relatively protected (especially with respect to the broader textiles industry) from automation and technological innovation, although parts of the production chain (labour, logistics) are becoming capital or technology intensive. Second, the key competitive advantage that winners in the apparel space will have is a large, low-cost labour force – therefore, developing/least developed countries are more likely to do well.

Table 10.4: Factors affecting competitiveness of India in global trade of garments

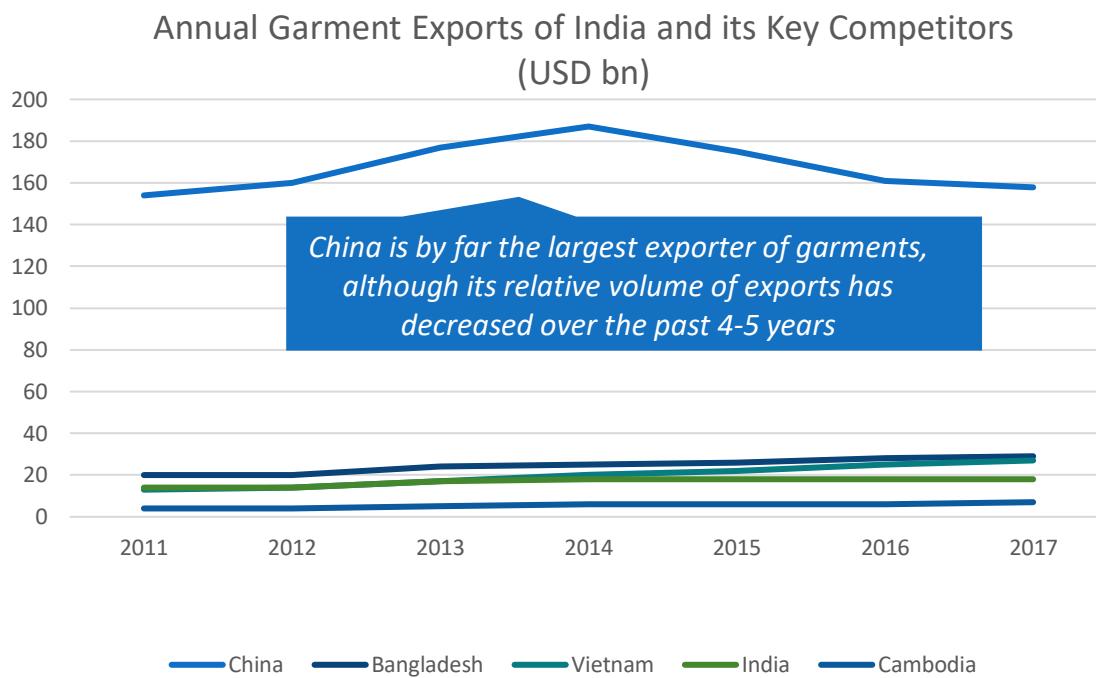
Category of costs	Bangladesh	China	India	Viet Nam
Monthly minimum wages in USD	65	150-338	116-209	116-166
Labour productivity as measured by Human Capital Index	57.84	67.81	57.73	68.39
Quality of Overall garment related Infrastructure Index	2.8	4.5	4.5	3.6
Power costs in US cents per KWH	9-12	13	10-12	8
Lending rate in Local Currency	13%	5-6%	12-13%	5-6%
Percentage of raw material in total cost	Over 50%	51	62	52

Source: Global Shifts in Textile Industry and India's Position (FICCI, 2016); World Bank Enterprise Survey

India's clothing exports were estimated to be USD 18 billion in FY17. While Indian exporters have increased their global share compared to a decade ago, their exports have not performed well for several years now. In 2017-18, India's exports of garments fell 4% in USD terms, while those of Bangladesh and Viet Nam increased by 8% and 10% respectively. China is the largest exporter of garments in the world, though its exports have taken a hit recently: down from USD 187 billion in 2014 to USD 158 billion in 2017. Since the value addition in garments is low compared to textiles and because of its rising wages, China is consciously shifting its garment industries to lower cost destinations like Viet Nam, Laos, Cambodia and Bangladesh, while retaining its textiles factories which will continue to provide fabrics to the garments units shifted abroad.

This presents a significant opportunity for India to grow – if India captures 20% of Chinese market share in garments, it can expect to see an additional USD 32 billion in textiles exports and ~1 million more jobs. India could achieve this by adopting an aggressive China + 1 strategy.

Figure 10.15: Annual Garment Exports of India and its Key Competitors (USD billion)



Source: World Trade Organization

10.4.2 Key Challenges faced by the Garments Industry in India

i. Scale of poor fabric quality and high trade logistics cost:

- One of the major problems faced by the garments industry is the lack of scale in fabric production and the comparatively poor quality of fabrics. These flow from the unorganised nature of the weaving industry and lack of modernisation in both, weaving and processing sub-sectors.
- Large buying houses from developed countries are reluctant to place large orders with Indian exporters because they are not sure if the orders would be serviced in time, and if so whether they would meet the desired quality standards.
- Among the four leading developing country garment exporters in the world, India is the one with the smallest share of large production facilities and considerable delays in managing turnaround of orders and time taken to reach port.

Table 10.5: Scale and Logistics: Impact on Costs

	Bangladesh	China	India	Viet Nam
Scale of Operations	80% large enterprises	80% or more large enterprises	80% small enterprises	80% or more large enterprises
Turn Around Time (from order to delivery)	50 days	31 days	63 days	46 days
Time Taken to reach port	1 day	0.2 days	7-10 days	0.3 days

Source: Interviews with exporters and CII-BCG experts

Restrictive and poorly implemented labour laws are among the factors that have prevented the expansion of domestic investment into larger scale of operation. Key impediments here include:

- Difficulty in hiring and firing: A majority of the SMEs in Bangladesh and Viet Nam employ 200 to 500 employees. In India, however, units employing over 100 employees must obtain Government approval for lay-offs as per the Industrial Disputes Act, 1947. This lack of flexibility in personnel management making it difficult for manufacturers to scale effectively.
- Uncertainty in quality and safety of labour: large scale of operations can be sustained only with large orders from global brands, which often insist on high operational standards, quality and safety of labour.

ii. Labour productivity:

- To ensure that labour can become a true source of comparative advantage for India, low wages have to be combined with productivity of labour to convert it to a competitive advantage. India lags behind some of the large exporting countries in this regard, which results in effective labour cost being relatively higher than the nominal cost.

Table 10.6: Productivity Adjusted Wage Rates Across Key Garment Exporting Countries

Country	Average Hourly Minimum Wage (USD)	Time taken to produce 1 trouser (minutes)	Labour Cost of 1 trouser (USD)
India	1	60	1.0
Bangladesh	0.5	60	0.5
China	1.8	40	1.2
Viet Nam	1.20	46	0.92

Source: Weaving the Way (BCG, 2016)

iii. Subsidies and other support policies offered by competitors:

- A large number of subsidies are provided to support the garment industry in Bangladesh, China and Viet Nam.

Table 10.7: Examples of Incentives Provided by Bangladesh, China and Viet Nam

Incentives Provided by Bangladesh, China and Viet Nam		
Exemption / Reduced Rate of Corporate Income Tax	Land Price reduced for investors	Duty free equipment, capital and construction material
Cheap infrastructure (factory, waste treatment)	Cheap Power supply	Duty free raw materials
Income Tax reduced for expatriates/technical experts	Incentives for Building Global Brands	Incentives for R&D
Land duty and stamp duty exempted/reduced	Incentives for upgrading technology	Fund for promoting trade
Lower rate of interest on loans	Support for training, housing of workers	Simplified VAT regime and large extent of VAT refund

Source: Interviews with exporters and industry experts

- A number of such subsidies are provided in India as well, including through support schemes of States, but four aspects stand out in terms of differences with other major competing countries.
 - All these economies strongly use Corporate Income Tax Exemptions for new investment, often provided for a period of over ten years (in China, this policy has now been reduced in its coverage by many other regional subsidy policies are in place).
 - In Bangladesh and Viet Nam, the duty-free import schemes have a larger coverage than India, especially for equipment.
 - Domestic enterprises that supply inputs to the exporters also get subsidies.
 - The competing countries have quicker subsidies or tax refunds mechanisms in place
- iv. Higher tariffs faced by Indian exporters in comparison to competing countries:
 - Countries competing with India have preferential tariffs in major markets, thus facing lower tariffs than India. This arises for two reasons. Least Developing Economies such as Bangladesh and Cambodia face zero tariffs in EU and a number of other developed economies. Some countries like Viet Nam have concluded FTAs with major importers such as the EU, Canada and Australia. Further, they have deeper FTAs with some economies such as Japan with which India too has an FTA, and greater market access with ASEAN being a member of that group.
 - Table below shows the relative tariff advantage from Bangladesh in the EU market. Viet Nam too would have a similar advantage since it has concluded a FTA with the EU.

Table 10.8: Relative Tariff Advantage in the EU Market

Country	HS 61	HS 62
European Union		
Bangladesh	0%	0%
China	11.79%	11.52%
India	9.43%	9.22%
Viet Nam	9.43%	9.22%

Source: Interviews with exporters and industry experts

- v. India's FTAs and Special Status accorded to Bangladesh leading to duty-free import of Chinese fabric
 - India allows duty-free import of Ready-Made Garments (RMGs) from Bangladesh under South Asian Free Trade Area (SAFTA). Since 2010, when quantitative restriction of 8 million pieces on RMG imports from Bangladesh was removed, imports jumped from 4 million pieces in FY10 to 72 million pieces in FY18, at a CAGR of 44%. Apparel imports from Bangladesh are expected to reach 1 billion pieces if they continue growing at the same rate.
 - Post GST apparel imports from Bangladesh increased by 57% during July 2017 to June 2018 as compared to same period of pre-GST era. In the pre-GST scenario imports from Bangladesh were attracting an effective import duty of 12.88% (on

Freight On Board prices) due to Countervailing Duty (CVD) component. However, after implementation of GST, CVD has been replaced by IGST, for which credit is available, and hence duty has effectively reduced to 0%.

- Prior to GST, Bangladesh-manufactured garments were ~3-6% cheaper than those manufactured in India. Post GST, however, the cost differential has increased – Bangladesh-manufactured garments are now ~15-19% cheaper than Indian-manufactured garments. This differential stems from the availability of cheaper fabric in Bangladesh. Given that Bangladesh lacks the backward linkages to meet its fabric demands, it imports the vast majority (~68%) from China, duty-free.³⁰
- Bangladesh then converts this Chinese fabric to garments, and exports the garments to India without paying any import duties. As such, duty-free access given to Bangladesh is, in reality, bolstering China's textile exports.
- Currently, apart from the basic customs duty of 25%, there are a host of other duties levied on imports from India into Bangladesh totaling almost 125%. These high, one-sided duties reduce scope for exporting Indian garments brands to Bangladesh's growing market which can be a win-win situation for both countries.
- If import of Bangladesh-manufactured continues to grow at the same rate (a CAGR of 44% in volume-terms, and 55% in value-terms), it could result in a potential loss of ~10 lakh jobs and ~USD 900 million in investment.

Table 10.9: Bangladesh's Fabric imports (In USD million)

Supplier	Bangladesh's Fabric imports (In USD million)						% share	CAGR
	2013	2014	2015	2016	2017			
China & Hong Kong	3739	3968	4476	4662	4440	68%	4%	
India	550	651	652	568	679	10%	5%	

Source: Clothing Manufacturers Association of India (CMAI)

10.4.3 Global Best Practices

- i. China

- **Labour productivity and efficiency:** Despite a 124% wage increase over the past decade, China remains the dominant player in the garments sector, largely due to gains in labour productivity that have enabled it to retain its unit labour cost competitiveness – the average price of Chinese apparel exported to the United States in 2015 was lower than it was in 1990.
- **Industrial clusters for apparel exports:** Development of large clusters for specific product categories has been a mainstay of the Chinese economy. Each of these clusters specialises in the production of one or more products, with a complete textile-apparel industry chain of spinning, packaging, embossing, weaving, dyeing and finishing, stitching ready-made garments and washing nearby. Common features of these cluster locations (which are largely concentrated on China's

³⁰ Since import of Chinese fabrics is meant for export, Bangladesh imposes no import duty on them.

eastern seaboard) are: a) Convenient transportation: close to highways and/or ports; b) Market proximity; and c) Excellent information, communication, and transportation infrastructure in the area.

ii. Viet Nam

- **Zero import duty on machinery and equipment imports:** As mentioned in the previous section, not only does Viet Nam levy no import duties on machinery imports, these schemes also have a larger coverage when compared to India.
- **Regulatory and financial incentives:** Since the mid-2000s, the Viet Nam government has offered extremely competitive financial incentives to businesses seeking to set up operations in the country. The Corporate Income Tax (CIT) in Viet Nam is 20%, and investments made in the textiles, garments and footwear sector are entitled to additional CIT incentives.

Table 10.10: Corporate Tax Rates across Selected Countries

Country	Statutory Corporate Income Tax Rate	Effective tax rate on corporate profits	Effective tax rate
China	25%	11.1%	68.0%
India	30%	23.5%	60.6%
Viet Nam	20%	13.1%	39.4%

Source: Dezan Shira & Associates (2018)

- **Trade agreements:** Viet Nam's Bilateral Trade Agreement with the US in 2002 and accession to the WTO in 2006 led to garment exports growing at double digit rates for almost a decade. Viet Nam was due to be a major beneficiary of the Trans Pacific Partnership (TPP), which is now considered defunct following the withdrawal of the US. In place of the TPP, Viet Nam is now seeking to pursue a bilateral FTA with the US. Viet Nam's FTA with the EU has eliminated at least 90% of tariff lines of Viet Nam's exports to the EU, including duties for some textile and garment products over a 5-7-year period. As a result, Viet Nam's exports of textile, clothing and footwear to the EU are expected to more than double between 2018-2020.

iii. Bangladesh

- **Multi-stakeholder policy initiatives to address wage and working conditions concerns:** In response to several accidents and other incidents of labour unrest, the industry — in collaboration with the government, foreign buyers, and development partners — has agreed on several policy measures to improve factory safety and social compliance.
 - One recent initiative is the Accord on Fire and Building Safety in Bangladesh (the “Accord”), a legally binding agreement between buyers and unions in which companies commit to conducting independent inspections and developing stronger worker-management committees in factories. It also

includes financial obligations by buyers to help suppliers pay for safety upgrades.

- Another initiative is the (essentially voluntary) Alliance for Bangladesh Worker Safety (the “Alliance”). Together the Accord and Alliance cover nearly half of the country’s total factories (1,600 factories for the Accord, and 600 for the Alliance).
- To cover the remaining firms, the government and representatives from local employers’ and workers’ organisations have signed an integrated National Tripartite Plan of Action (NTPA) under the guidance of the International Labour Organization (ILO).
- **Government support:** Given that the apparel industry is the largest employer in Bangladesh, the government has several incentives in place to encourage investment in this sector: 15% corporate tax for Ready Made Garment (RMG) units (12% for green factories), Back-to-Back Letters of Credit (LCs), 15% forex retention for international operations, tax holidays and incentives for investments in remote/backward regions, etc.

Table 10.11: Buyer’s perception of competitive comparison between countries

	Bangladesh	Cambodia	China	India	Indonesia	Viet Nam
Cost	***	***	*	**	**	*
Speed	*	**	***	*	***	***
Compliance	*	**	***	*	***	***
Quality	**	**	***	*	**	***

* Least competitive; *** Most competitive

Source: ILO

10.4.4 Policy Recommendations (in order of priority)

- i. Scale up existing garment companies:
 - India’s competitiveness in the global apparel trade is challenged by lack of scale in garment manufacturing. The garment manufacturing space in India consists primarily of small scale, fragmented companies – in 2011, the organised sector contributed only 31% of overall industry output.
 - Large scale capacity additions will enable India to achieve the vision of 10% CAGR in garments and create 3 million jobs. India can differentiate itself from its competitors Bangladesh and Viet Nam by scaling up of garment firms to provide complete service offering to brands and retailers.
- ii. Take active measures to move India up the value chain in garment production:
 - India can truly differentiate itself from other apparel producers by moving up the value chain and positioning itself as a sourcing destination capable of exporting

specialised products and services, capable of providing the end-to-end garment production supply chain.

iii. Attract Chinese and other large companies to manufacture in India:

- With increasing labour costs in China and newly-imposed tariffs on Chinese imports to the US, India can seek to gain a growing share of the garments manufacturing pie by encouraging Chinese and other companies (linked to large global brands) to manufacture in India.
- This can include specific negotiations with large Chinese, European and US textiles companies and / or direct talks with the Chinese government.

iv. Review existing FTAs, especially with competitors like Bangladesh

- India has FTAs with several South Asian countries wherein, owing to export competitiveness and duty-free advantages, especially in textiles and RMGs, the trade deficit has worsened. There needs to be a fast track review of current FTAs where market distortions have taken place ballooning trade deficits.
- Trade bodies which expect textile imports from Bangladesh to rise further have asked the Government to introduce a rule of origin for duty-free imports from Bangladesh under SAFTA. India should also insist on an equivalent and concessional duty structure for import of garments into Bangladesh from India.
- In order to regain our market share lost to Bangladesh and Viet Nam in garments, conclusion of Bilateral Trade and Investment Agreement (BTIA) with EU is very important.
- India should put a condition that 70% of fabric or 50% of Freight on Board (FOB) should be Indian content to qualify for duty-free access from Least Developing Countries (LDCs). This will prevent China from taking undue advantage of a facility that India has provided to LDC countries and increase penetration of Indian textiles exports in LDCs.
- India should also insist on an equivalent and concessional duty structure for import of garments into Bangladesh from India. The new duty structure could compensate for the decrease in effective import duties on Bangladesh in post GST era.

v. Improve existing incentives to upgrade garment production technology and improve global competitiveness:

- Indian textiles companies do not have the high-quality machinery that key competitors have due to significant machinery import duties and general high cost of purchasing. A revised Export Promotion Capital Goods (EPCG) scheme should be de-linked from export performance and the tariff free treatment to selected machinery be provided for the sector as a whole without any link to exports.
 - The Amended Technology Upgradation Fund Scheme (ATUFS) provides the right incentives to companies to purchase these products. However, it is marred by documentation delays. The committed liability & non-release of

ATUFS subsidies is causing liquidity issues for companies. As of December, 2018, there were 9,303 affected cases and approximately INR 6,000 crores in subsidy blocked. To resolve this, the Ministry of Textiles may develop a system for financial institutions to upload digital committed liabilities and final claims.

- Ministry of Textiles may list the pending cases on daily basis and place on website so that the mills can follow up. Further, a time-bound digital decision-making process must be implemented to address the problem.
- Provide subsidy support similar to competing economies as mentioned in the Table and Chart above.

vi. Modify duty drawback system to incentivise exports and refund embedded taxes on inputs into exports:

- The sharp reduction in drawback rates announced by the government for textile and clothing products has had a significant impact on textiles goods exports – many firms have shut down as a result.
- The drawback rate announced for garments should be increased and the taxes and levies on inputs into exports should be fully refunded, GST refunds also need to function properly.
- Given that apparel markets operate on very small margins, these rate changes have had a major impact on profitability and ability to continue exporting.

10.5 Electronics

10.5.1 Background

Electronics Industry is one of the world's largest and fastest growing industry and is increasingly finding applications in all sectors of the economy. The electronics hardware manufacturing sector in India faces lack of level playing field vis-à-vis competing nations on account of several disabilities. The industry in India is confined to low-end value chain and value addition, which currently is as low as 5 to 10%.³¹ The recommendations in this Report aim to give effect to India's vision to become a global hub for manufacturing in the Electronics sector.

10.5.2 Focal Point

Overall global production for this sector is around USD 2.7 trillion (2017). Significant export opportunity exists in Internet devices and components as 95% of the world population accessing internet, uses wireless electronic devices. Only few jurisdictions such as China, Taiwan, Korea RP, Viet Nam etc. cater to this global demand. India has the potential to shift global manufacturing ecosystems from these countries to India

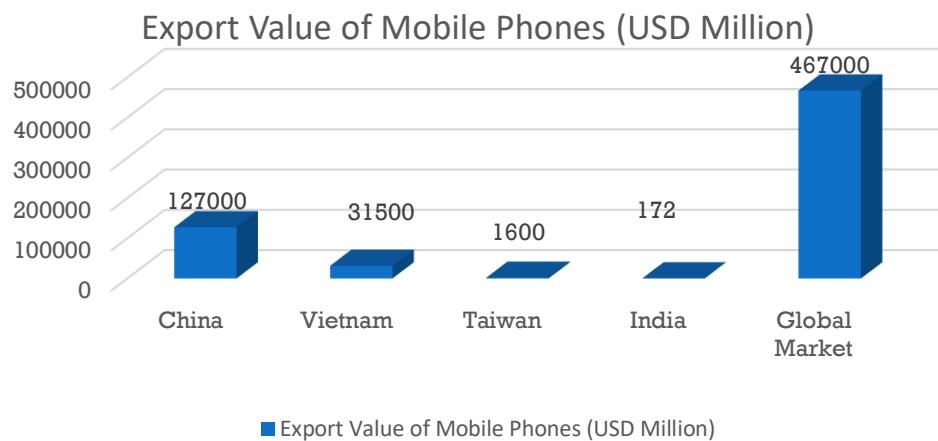
³¹ Electronics Manufacturing Summit 2018, Proceedings Report.

and to cater to this segment by offering incentives which would boost manufacturing in India.

10.5.3 India's Position

The Electronics sector in India contributes only 2.3% to its GDP.³² India's production of Electronics is 2.1% of the total global production³³, out of which mobile phones constitutes 34%.³⁴ Overall, India is a net importer of Electronics and has a trade deficit of USD 45.98 billion.³⁵

Figure 10.16: Export Value of Mobile Phones (USD Million)



Source: World's Top Exports (WTE) and Statista.

10.5.4 The Problem and Challenges

The major challenges associated in the Indian Electronics Sector include lack of adequate infrastructure, supply chain and logistics issues, high cost of finance as compared to other countries, high corporate tax rates, inadequate components/ parts manufacturing base, lack of high-end technology and consequential dependence on imported technology, etc.

The Budget 2015-16 announced a tariff-based policy promoting indigenous manufacturing of cellular mobile handsets/ components via a differential excise duty dispensation. This policy formed the essence of the Phased Manufacturing Programme (PMP), which was notified by Ministry of Electronics and Information Technology in April 2017. The objectives of PMP were import substitution, enhanced investment, building Indian industry for electronics, and enhancing exports. While the objective was to substitute import by establishing a domestic component/ sub-assembly

³² National Electronics Policy, 2019.

³³ JEITA Report, 2017 and Indian Brand Equity Foundation, July 2018.

³⁴ Annual Report 2017-18, Ministry of Electronics and Information Technology.

³⁵ Directorate General of Foreign Trade, Ministry of Commerce and Industry.

ecosystem, the **import bill** for electronic components/ sub-components has increased from **USD 8.8 billion in 2014** to **USD 12.6 billion in 2017**.³⁶ The Indian mobile phone/ smartphone brands (i.e. Micromax, Intex, Lava and Karbonn) have experienced significant decline in market share. Such brands held a market share of **around 31% in 2015** which is now **around 7% in 2018**.³⁷ Foreign mobile phone/ smartphone brands like Vivo, Xiaomi, Samsung, One Plus, Huawei, etc. have significantly penetrated Indian market and the Indian brands do not feature in top 5 vendors of smartphones in India any longer.

While keeping the objective of India becoming a manufacturing hub for the electronics sector at the forefront, one of the fundamental issues which also needs to be borne in mind is the challenge brought by the United States against the various incentives provided by India to the market players. Since export linked subsidies are prohibited under the WTO regime (i.e. Agreement on Subsidies and Countervailing Measures (ASCM)), the United States has challenged various subsidies that are provided by India at the WTO (*DS541*), e.g. Export Oriented Units and Sector Specific Schemes; Merchandise Exports from India Scheme; Export Promotion Capital Goods Scheme; Special Economic Zones; Duty free imports for exporters Programme; etc., as allegedly being inconsistent with the ASCM. The continuance of these schemes would be dependent on the outcome of the WTO dispute.

10.5.5 Best Practices around the World³⁸

- i. China: tax exemptions for the first few profit years, favorable tax rates for foreign invested enterprises, specific deductions on certain costs based on technology, low cost of land, subsidy for interest, etc.
- ii. Viet Nam: lower tax rates and tax holiday for few years, income tax exemptions based on foreign investments, flexible land policies, low cost of finance, etc.
- iii. Taiwan: tax credit upto 15% of R&D expenditure against income tax liability, expedited process for land acquisition, etc.

10.5.6 What's Needed/Solution

- i. The National Policy on Electronics projects a target of increasing the production volume of mobile phones by 4 times, with an overall increase in production value by 10 times by 2025. The framework requires focus on 4 forefronts (P.I.T.H)- policy, investment, technology and human resources:
 - 'P'olicy - A favorable government policy is a precursor to foster the following (I, T & H):

³⁶ News Article published in Financial Express.

³⁷ News Article published in Economic Times.

³⁸ E&Y Report.

- 'I'nvestment - Conducive investment environment for enhancing capital flow;
- 'T'echnology - Conducive manufacturing environment would allow global players to bring in the latest technology;
- 'H'uman Resources – Efficient utilization of skilled manpower. Quality of workmen in India is considerably better than that in China and the cost is 1/3rd of China.³⁹

- ii. The incentives/ subsidies to be provided to the market players should avoid export contingency to ensure coherence with the WTO framework
- iii. Further, the need of the hour is a shift from a tariff-based policy to an incentive-based policy for manufacturing of electronics. The policy may provide incentives based on certain specified criteria such as technology, investment commitment, manufacturing capacity, employment generation, value addition, etc.
- iv. There is also a need to shift the focus from volume based manufacturing to value based manufacturing.
- v. Also, the government may consider establishing industrial parks which would cater to specific needs of the electronics manufacturing sector (similar to IT parks). Additionally, unrebated taxes such as those paid on consumption of electricity, etc. can be accounted for in the duty rebate.

10.5.7 Other Recommendations

- i. Tax Holiday for a considerable period (under Indian tax laws) to incentivize investment by domestic as well as foreign enterprises in high-end electronics;
- ii. Shift of focus from volume to value: enhancing a manufacturing environment for high-end Smart Phones, components and sub-assembly;
- iii. Encouraging industry-led R&D in all sub-sectors of electronics; the GOI may also consider partnering with the private sector;
- iv. Easier lending norms for high-end electronics based on identified criteria;
- v. Focus on improving India's Ease of doing business ranking (77/190, according to World Bank Report, 2019). India's current subsector rankings: starting a business- 137/190, enforcing contracts - 163/190;
- vi. Guidance from the incentives offered by other countries like China, Vietnam, Taiwan, etc; and
- vii. Introduction of industry-friendly labor laws.

³⁹ Per industry sources.

10.6 Medical Devices

10.6.1 Global Industry Overview and India's Relative Performance

The Global medical devices industry is currently valued at ~USD 103 billion. It is poised for steady growth, with global annual sales projected to reach nearly USD 800 billion by 2030. As per industry estimates, the Indian medical devices market is presently valued at over USD 11 billion, and is expected to grow to USD 50 billion by 2025. India is counted among the top 20 global medical devices market and is the 4th largest medical devices market in Asia after Japan, China and South Korea.

The total import of medical devices is more than 75% of total medical devices sales in India. Between FY12 to FY16, the import trade of medical devices increased by 16.8%, whereas export trade increased by 25.7%. The import of medical devices has grown from USD 2.46 billion in FY12 to USD 2.87 billion in FY16. Diagnostic imaging, IV Diagnostic and Other Medical Devices (ECG, ophthal equipment, heart lung machine, etc.) constituted 70% of total import in India in FY16. US, Germany, China, Japan, and Singapore were the five largest exporters of high technology medical equipment to India. US remained the largest exporter accounting for 28.1%. The export of medical devices has grown from USD 0.78 billion in FY12 to USD 1.65 billion in FY17.

Diagnostic imaging, consumables, and other medical devices constitute 86% of total export trade for Indian medical devices industry in FY16. The US was the chief destination for export and contributes close to 15% of the export trade. The European Union (incl. Germany) cumulatively constitutes of 21.7% of the total export trade. Singapore, Germany and China were the other leading export destinations with shares of 7.0%, 6.7% and 6.4% respectively. Going forward, it is expected that India's export of medical devices will reach ~USD 10 billion by 2025.

The sector is also witnessing strong FDI inflows, which reflects the confidence of global players in the Indian market. US, Europe and Japan are the key source countries for FDI in medical devices. The equipment and instruments, consumables and implants segments have attracted the most FDI. In 2014 and 2015, the FDI inflow was USD 133.96 million and USD 160.24 million respectively. FDI inflows jumped by almost 300% in 2016 to USD 439.01 million.

10.6.2 High Potential Manufacturing Segments in India

The high-tech end of the medical device value chain is currently led by multinationals with extensive service networks; whereas low end equipment and disposables are led by domestic manufacturers because of their cost effective innovations. Analysis by the WHO (India office), Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Department of Pharmaceuticals, Ministry of Chemicals and

Fertilisers identified the following segments to be the most promising/exhibit the most potential for attracting investments:

Table 10.12: High Potential Manufacturing Segments in India

Key Segment	Import Dependency (%)	Share of overall Medical Devices market (%)	Overall attractiveness for Indian manufacturers to invest in this segment
Diagnostic Imaging	52	30	Very High
Others	83	24	Very High
Consumables	35	16	High
IV Diagnostics	67	10	High
Orthopaedic and Prosthetics	62	8	High
Dental Products	60	3	Medium
Patient Aids	50	9	Medium

Source: Medical Devices Manufacturing in India – A Sunrise (WHO, 2017)

10.6.3 Key Challenges faced by the Medical Devices Sector in India

i. Lack of a favourable policy and regulatory framework:

At present a few medical devices are covered under the Drug and Cosmetics Act (D&C Act). As devices are governed in line with drugs, regulatory compliance becomes quite challenging. For example, implantable medical devices have to be routed through Central and state governments, a process which often takes 24-48 months. This delay, due to the absence of a single window clearance, hinders new product development.

ii. Medical devices, unlike pharmaceuticals are dependent on a mix of technologies such as engineering, electronics, material sciences and information technology. Innovation, capital and technology drive the industry. India has not been able to bridge the gap between investments, skilled resources and innovation to fully capitalise on the potential this sector offers.

iii. Nominal tariff protection and inverted duty structure:

There is no clear comparative cost advantage in comparison to other emerging market economies, and policy issues like nominal tariff protection and inverted duty structure (i.e., finished goods are cheaper to import than raw materials for domestic manufacturing) do not help in creating an enabling environment.

In the last decade, since import duties fell to 0-5%, Indian manufacturers have resorted to imports and re-export of Chinese products as Indian labelled medical devices. This could potentially undermine the high precision (yet affordable) brand space that Indian medical devices enjoy. It may also result in loss of credibility if overseas buyers realise that what they're paying extra for is not Indian, but (low quality) Chinese re-export.

iv. Lack of a long-term strategy for investment in and promotion of R&D:

The medical devices industry is complex and requires a robust ecosystem that may take decades to develop.

Global hubs for manufacturing of medical devices include: Minnesota, Minneapolis, Ireland and California. The ecosystem that exists in these hubs – infrastructure, industry-academia connections, etc. – has been in the making for decades.

About 8-10 years back, the Chinese government invested USD 125 billion in the Chinese healthcare industry over a period of 3 years – this gave a huge fillip to domestic manufacturers, and in many ways helped pave the way for the success of Chinese companies in the healthcare sector.

Indian manufacturers of medical devices compete in prices. As such, the margins are too small to permit them to invest in R&D themselves. Moreover, most manufacturers in India are working towards making different types of medical devices (more) price competitive/cheaper; hardly anyone is thinking about developing the next generation of medical devices. An ecosystem that supports high-end R&D is required to make a country competitive in this sector. This will require substantial government support – both in terms of capital, and thought leadership.

10.6.4 Global Best Practices

In this section, we present global best practices in order to demonstrate what is possible policy wise if a country wants to enhance export growth.

i. US

- **High R&D expenditure:** R&D spending continues to represent a high percentage of medical device industry expenditures, averaging 7% of revenue. Compared to several other industries including automotive, defence, and telecommunications, the medical device industry invests a higher percentage of yearly revenues into product innovation, reflecting the competitive nature of the industry and constant innovation and improvement of existing technologies.
- **Moratorium on MedTech Tax:** The Consolidated Appropriations Act, 2016 signed into law on December 18, 2015 a two-year moratorium on the medical device excise tax 2.3%. In January 2018, this moratorium was extended for an additional two years. Various industry associations are now campaigning for a full repeal of the tax, which is expected to: (i) Prevent an estimated reduction of USD2 billion in R&D investment each year; (ii) and add 2 million jobs, supported directly and indirectly by the medical devices industry.

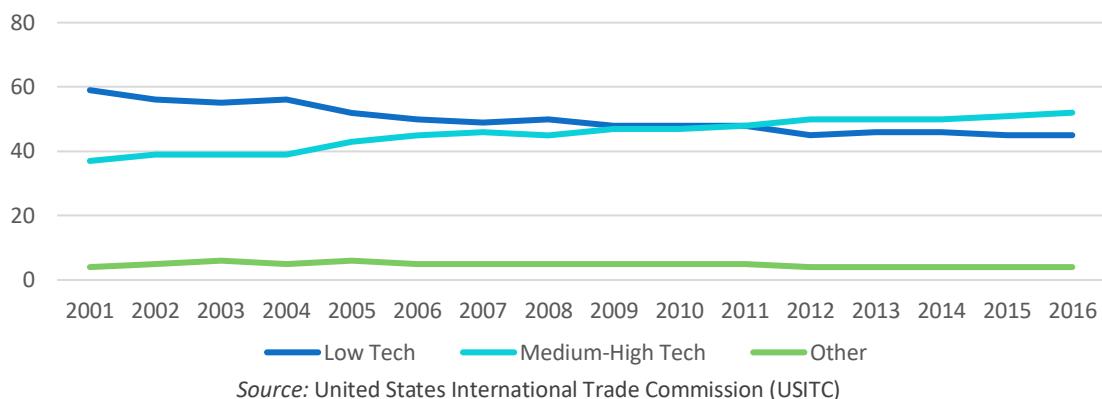
- **Robust industry-academia linkages:** The United States is home to 141 accredited medical schools and approximately 400 major teaching hospitals and health systems, many of which rank among the best in the world. Many of these academic institutions collaborate with medical device companies to develop new medical technologies.
- **Harmonising domestic and international quality standards:** In 2011, the US co-founded the International Medical Device Regulators Forum (IMDRF) that aims to accelerate international medical device regulatory harmonisation and convergence. The American government expects IMDRF membership to expand US medical devices manufacturers' access to developing countries, and lead to greater market penetration.

ii. China

- **Prioritising regulatory approval for innovative medical devices:** In 2014, the National Medical Products Administration (NMPA) announced expedited regulatory approvals for devices that it deemed innovative. 20 Qualifying devices are required to substantially improve upon the safety and performance of similar devices already in the market and contain novel technology that has been internationally recognized and that is patented in China. Since this policy's inception, Chinese companies have been its principal beneficiaries, accounting for more than 90% of the 117 devices approved (as of January, 2018) under this expedited process. In contrast, MNCs represented less than 10%. The approved devices cover many high-value-added segments including diagnostics (e.g., digital radiography) and therapeutic devices (e.g., interventional cardiology).
- **Requirement to carry out clinical trials for Class 2 and 3 medical devices in China:** This policy represents a considerable departure from the former system, which permitted firms that had obtained market clearance in other countries to sell in China without undergoing additional regulatory procedures. The former regime benefited MNCs in that they could sell devices in multiple markets while only submitting clinical data once. Because the costs of collecting these data range from USD 1 million to USD 1.5 million, and because it can take three to five years to obtain market clearance, MNCs may be discouraged from selling high-tech goods in China's market under the new policy, thereby benefitting local Chinese medical devices manufacturers.
- **Made in China 2025:** The plan, which was announced in 2015, prioritizes the expansion of high-tech medical device production. According to "semi-official" targets, China intends to increase the domestic production to meet 50% of the country's demand by 2020 and 70% by 2025. Similarly, among the priorities listed in

China's 12th five year plan from the Ministry of Science and Technology is the advancement of local manufacturers in high-tech medical technology sectors, such as diagnostic imaging.

Figure 10.17: China's composition of medical devices exports (2001-2016; %)



Source: United States International Trade Commission (USITC)

iii. South Korea

- **Regulations to better govern new medical devices:** The Ministry of Health and Ministry of Food and Drug Safety (MFDS) have agreed to adopt a new value-based evaluation system for medical devices and related technologies. Under this program, the regulatory bodies plan to deploy “fast-track” approval procedures for next-generation medical devices and also to allow higher health insurance reimbursement rates for innovative medical devices, to reflect their value.
- **Harmonising domestic and international quality standards:** In 2017, South Korea became a member of the International Medical Device Regulatory Forum (IMDRF), to maintain medical device regulations in accordance with international standards. The Government expects IMDRF membership to ensure the safe and quick launch of innovative medical devices in Korea and other global markets and to help South Korean companies gain first-entrant advantage.
- **Leveraging AI to develop next-gen medical devices:** The MFDS has established a formal approval criteria for the new generation of medical devices based on AI and big data to allow wider patient access to more accurate diagnostic and treatment options and also to enable companies to develop and commercialise their products in less time and at a lower cost. Samsung Medical Center (SMC), in partnership with Microsoft Korea, is building an AI-based precision health care system to analyse medical data, optimize clinical decision-making and establish disease-specific prediction models

iv. Ireland

- **Targeted training, upskilling and development of a talent pool to support strategy:** The Irish MedTech Skillnet, a not-for-profit network with the Irish MedTech Association provides training and networking opportunities to the MedTech and

Engineering sectors. The network has received over €3.7 million in government funding since 2008, developed 14 specialised programmes for the sector from level 5 to Masters, and has trained over 8,900 MedTech professionals. Recently, the Irish Medtech Association has successfully gained approval for two major new apprenticeships for technicians and engineers.

- **Venture Capital (VC) and Seed Funds:** Several VC and Seed Capital funds have been established to support high potential start-ups. These include:
 - **Fountain Healthcare Partners** is a €73 million Life Science focused venture capital fund headquartered in Dublin, Ireland. The fund specialises in making investments in Biotechnology, Medical Device, Specialty Pharma and Diagnostic Companies. The fund invests between €500,000 and €7,000,000 per company over the life of the investment;
 - **Seroba Life Sciences Fund II** is a €75 million venture capital fund that invests in early-stage start-ups to more mature biotech and medical device companies;
 - **Bank of Ireland Seed and Early Stage Equity Fund 2009** is a €32 million fund that incorporates the €10 million Bank of Ireland MedTech Accelerator Fund. Investments are made in the range of €100,000 to €500,000. The primary focus is on high potential start-up companies;
 - **The Bank of Ireland Start up and Emerging Sectors Equity Fund 2010**, managed by Delta Partners was established in 2010. This €17 million fund has an investment focus on technology-based businesses and MedTech which are headquartered in Ireland. The investment range is €100,000 to €650,000; and
 - **The AIB Start-Up Accelerator Fund, managed by ACT Venture Capital**, was established in 2011 as a €22 million Seed Fund. Investments made by the fund focus on developing high-growth, export-oriented companies in emerging sectors such as Medical Devices, Digital Media, Internet, Software and CleanTech. The fund investment range is €100,000 to €650,000.

10.6.5 Policy Recommendations (in order of priority)

- i. Separate the regulation of medical devices from drugs/cosmetics:
 - While the government recently came out with the MDR, 2017 under the D&C Act itself, there is a pressing need for medical devices to be regulated by a standalone legislation, that is drafted specifically addressing the nuances of the medical device industry – it is harmful to the overall growth of the medical devices exports (let alone exports) to regulate hypodermic needles, catheters etc. as drugs.
 - No other country regulates medical devices as drugs; there is no reason for India to do this.
 - A single ministry for the regulation of medical devices, right from import and manufacture, up until pricing and sale of the products, would go a long way in

easing the compliance burden for both domestic as well as foreign manufacturers. Currently, there are different ministries involved in the regulation of the industry (labelling/packaging, pricing and marketing approvals are under different ministries, for example), making it difficult for companies to do business in India.

- Instead of notifying and regulating medical devices under the D&C Act, the Government may also consider alternative regulatory mechanisms like the BIS Act and Rules. This could be achieved through a phased transition – low transition for high-risk devices and high transition for low-risk devices.

ii. Increase investment in R&D:

- Extend R&D tax benefits to Limited Liability Partnerships.
- With less than 20 types of biotechnological engineering courses, the country needs to expand its talent pool. Increasing the number of pure sciences Master's and PhDs at IITs, IISERs, IISC and other Tier 1 institutions to 3x would help bridge the demand-supply gap in the industry.⁴⁰
- Build skill and capacity through education and certification. A professional certification (the equivalent of CA/CFA in Finance) may be useful in this regard. A first step in this direction has already been made with the introduction of Indian Bio-medical Skill Consortium (IBSC) set up jointly by Andhra Pradesh MedTech Zone (AMTZ), NABC under the Quality Council of India (QCI), and Association of Indian Medical Devices Industry (AiMeD).
- Under IBSC a large number of assessment centres are being planned across several states in India where competency tests on key bio-medical engineering skills could be undertaken by practitioners of bio-medical engineering from mechanical, electronics, electrical, health IT, clinical and allied engineering subjects.
- The outcome shall be a Technology Competency Score (TCS) level (1 to 10) which shall be framed on parity with other such professional bodies in many other countries. While the TCS score is not intended to be a licence to practice the subject, it can serve as an effective internationally harmonised rating for skill recognition.

iii. Rectify the inverted duty structure and nominal duty protection:

- Finished products of medical devices should be charged higher import duty and IGST compared to their raw materials/packing material.
- Reduce the custom duty and IGST on raw material and packing materials required for manufacturing medical devices in India for exports.
- While 66 medical devices (of 137) had a correction of inverted duty structure in January 2016, by reducing duty on raw materials to 2.5% and increasing duty on finished goods to 7.5%, the duty on the remainder of the Devices (other than Chapter 90 items) needs to be similarly corrected. Additionally, a nominal duty

⁴⁰Please refer to Annex VII.3 for more details.

protection of 10-15% is needed to attract investment and incentivise importers/traders to turn to manufacturing as has been done for mobile phones.

iv. Rationalise standards, and set-up mutual and/or global recognition of medical devices:

- Companies must currently adhere to two sets of standards: the Indian standards (as defined by BIS) and ISO/IEC standards. In the event of a discrepancy between those sets of standards, companies must comply with both. This generates significant confusion for exporters/manufacturers – efforts need to be made to peg Indian standards to global standards.
- To ease the export of medical devices, negotiations and quality measures must be implemented to permit the recognition of Indian-certified medical devices in the US, and US-certified medical devices in India. 80-90% of the medical devices industry is export-import driven, so getting this through will likely further boost exports and result in growth for the Indian medical devices sector.

v. Strengthen Make in India provisions to nurture the ecosystem for medical devices through the creation of MedTech parks:

- Make In India has led to the creation of MedTech parks through government subsidy and land allocation, however the pace of development needs to quicken. To achieve this the government needs to create dedicated bodies to formulate the structure of these parks.
- As India already has a decent manufacturing capability for low-end medical devices, high-end and innovative devices manufacturers should be provided with an access incentive, reduced tax rates and linkage with medical and engineering colleges. This push for innovative medical devices can be further augmented through incubators, regulatory incentives (faster clearances, provision of low-cost funds for indigenous scientific innovation) etc.
- Existing well-established clusters also need to be made more competitive via the provision of common testing and manufacturing facilities. This will also help diminish the need for existing manufacturers to relocate their operations to MedTech parks.

vi. Expedite and harmonise the process of issuing of ‘Free Sales Certificate’:

- To export medical devices, manufacturers need to register with foreign countries and seek approval from their regulatory authorities for permitting import of medical devices into that country. Regulatory Authorities usually ask for a ‘Free Sales Certificate’ from the Country of Origin; the intent being that if a product is freely sold within the Country of Origin and safe for the people of that country, then it would also be acceptable for the importing country. Typically, Medical Devices Regulatory Authorities desire this Free Sales Certificate to be issued by Ministry of Health or the Regulatory Authority of the Exporting Country.

- The Ministry of Health and Family Welfare (MOH&FW) only provides 'Free Sales Certificates' for the 23 notified medical devices; for the remainder of thousands of medical devices which are not yet covered in Regulations, the Free Sales Certificate is currently issued by Directorate General of Foreign Trade (DGFT), as in the case of Consumer goods and Engineering items. Many Countries especially China, South & Central America are not satisfied with the Certification issued by DGFT and insist on Certification by MOH&FW for medical devices. In the absence of such Certification, they do not permit registration to enable the Indian manufacturers to enter and sell in their domestic market.
- It is urgently required that either MOH&FW formally authorizes DGFT to issue free sales certificates for medical devices not notified as Drugs, or the CDSCO starts issuing these to those manufacturers who have IS/ICMED/ISO 13485 QA Certification.

vii. Provide financial incentives for export of domestically manufactured/innovative products:

- Incremental export incentives (IEIS) at 2% in a WTO compatible manner;
- Interest equalisation scheme (interest subvention) in pre and post shipment rupee export credit on exports on medical devices and;
- MEIS (Merchant Export for Indian Schemes) to be increased to 8% (from existing 3% to 5%).

viii. Offer preferential treatment in Government procurement:

- Preference may be given to medical devices which are being manufactured in India with an additional preference for medical devices manufactured by MSMEs. The conditions of tender documents such as experience for last three/ five years etc. can be suitably relaxed for new manufacturers.

ix. Issue Technical Regulations (TRs) for product categories, not individual products:

- Given the current provisions of the D&C Act, it may take time to notify all medical devices. It is, however, possible to at least regulate the quality management systems in the industry by notifying ISO 13485, which is an internationally accepted standard by all regulators, and has been adopted in Medical Devices Rules (MDR), 2017 vide Schedule 5; Or, even Schedule 5 itself for compulsory compliance.
- As in MDR 2017, this can be done by designating notified bodies by Central Drugs Standard Control Organisation (CDSCO) which are accredited as per international standards by National Accreditation Board for Certificate Bodies (NABCB) for audit of medical devices manufacturers.
- In case there is a problem in issuing such a notification under the D&C Act, it can be notified under the BIS Act, 2016 which applies across sectors and has provision for using 3rd party agencies for checking compliance accredited by NABCB.

- This can be done by the Ministry of Health, as under the BIS Act notifications are typically issued by the Concerned /Line Ministry. It's a good practise to have a single regulator, and hence the notification should be issued by the Ministry of Health.
- The regulation of medical devices can be done by using horizontal/group standards other than **ISO 13485**, such as: (a) **ISO 16142-1 and -2** which cover the essential principles of safety and performance of medical devices (similar to those outlined by the Ministry of Health) which is a horizontal standard; (b) **IEC 60601-1** (medical electrical equipment – part 1) which covers general requirements for basic safety and essential performance, which is a product group standard.
- Where product standards are available, these could be specified – either BIS standards or international standards of ISO/IEC, or any other published standards, or manufacturer's validated standards in that order.

10.7 Agriculture

Since the government has brought out a draft agricultural exports policy in December 2018, which will be given final shape after receiving feedback from stakeholders, we have refrained from providing a detailed status and recommendation note on the sector. However, there are a few areas which need to be emphasised in the context of boosting our agricultural exports, which are currently languishing at the 30th position globally (as per **Table 1.1**).

First, we need to enable our farmers to get a good return from selling their produce, whether by effecting domestic sales or exports. Towards this end, we need to dismantle the Agriculture Produce Market Committees that are still functioning as great barriers to price discovery and are perpetuating the exploitation of farmers by vested interests. Second, the use of analytics to project demands for commodities and their prices in future (both in the domestic as well as international markets) can be disseminated among farmers' organisations to help them take appropriate sowing decisions. A robust forward markets mechanism for all crops in the country can help immensely in this endeavour. Third, the returns from exporting fruits and vegetables is much more than from exporting cereals like rice. Because of a short shelf life for fruits and vegetables, we need to provide appropriate grading and sorting facilities, warehousing, refrigeration and transportation for our horticulture exports, on priority basis. Fourth, we urgently need to develop high yielding pest resistant varieties for fruits and vegetables that are in demand in the markets abroad. Fifth, we need to develop and conform to international standards by way of fertiliser and pesticide use and sensitise our farmers to encourage them to adopt the relevant practices. However, there must not be a 'stop and start' policy on exports and imports of agricultural products, because that prevents farmers from taking objective decisions on sowing different crops

While it is important to exploit the untapped potential of agricultural exports, we need to remember that India is supporting roughly 17.8% of the human population and 15% of the animal population of the planet on only 2.4% of the land and 4% of the world's water resources. Keeping in mind that certain regions in India are already water stressed, we need to harness our water resources prudently. Thus, excessive growing and exporting products of water intensive crops like sugarcane needs to be discouraged. Also exporting large volumes of rice, which is being grown in some important areas in northern India by exploitation of ground water, needs to be similarly discouraged. A final word of caution. One kilo of bovine meat has been calculated to consume approximately 20000 litres of water by way of feed, fodder and drinking water for an animal during its lifecycle. Thus, in light of India's tight water position, the sustainability of exporting meat is highly questionable.

11 Data Driven Approach to Export



11. Data Driven Approach to Export

11.1 Overall Need

International trade is an important source of livelihood for nations. Hence it is important to anticipate and develop early signals and insight on various changes in the international trade which can potentially affect India's trade. Data is an important resource, which can yield many interesting insights and predictions. Data which has been mined so far mainly fall in the realm of structured data. Recent developments in methods and capacities have increased the scope of analysing un-structured data which are mainly texts and images available in public domain. Availability of such data have given us opportunities to improve the precision of forecasts and find proxies which can tackle the relevant problems even in the absence of relevant data in certain spheres.

Despite the need, and availability of advanced methodology for Big data analytics, India has been very slow in building capacity for data-based decision making in trade. In this context, we suggest the following as important focus areas for India in terms of use of Data analytics for promoting international trade, creating market for its products and integrating in the global network. Some of the important applications of Data analytics in trade include the following: scientific forecasting of trade variables; estimating uncertainty of trade environment; tackling issues related to trade in similar products; impact of trade on employment; more accurate reporting of services trade data; and contribution of SMEs to India's exports.

11.2 Details of Where Big Data can play role in Trade

Trade data forecasting have mainly used historical structured data. However, on account of high uncertainty in the trade environment, forecasts using both statistical and mathematical models have been wide off the mark. One way of tackling the problem is to analyse unstructured data by browsing through diverse sources of information - newspapers, social network cites - to find out what people are thinking about the uncertainty of the trade environment. Combining such data with structured data (e.g., those already with DGCI&S) can make the forecasts more precise, especially when applied to specific industries.

Monitoring uncertainty and developing early signals in trade environment is crucial for both policy makers and firms. Indices like Economic Policy Uncertainty (EPU) make use of newspaper articles on the topic. In a similar way, a real-time **Trade Policy Uncertainty (TPU) index** can be thought of by extracting data on number of articles on this topic and by using other innovative sources and proxies. Suitable normalisation can be applied to finally arrive at a final index. This index may be correlated with

certain other indices which are obtained through structured data from credible sources to validate the new index. The index may also be correlated to **volatility of trade** to understand its usefulness.

A major issue in trade data related to movement of similar but differentiated goods between any two countries is that it creates difficulties in calculating the competitiveness. Since trade data is harmonized till the HS six-digit level across the countries, this compounds the problem. Secondly, the indirect way of calculating this through differences in the Unit Value Index also does not solve the problem. A particular consignment may contain products with widely varying prices reflecting widely varying quality. Analysing consumption patterns of destination countries through unstructured data may point out to varying preferences over similar goods. This may help in estimating **demand for similar but differentiated goods**.

One of the major challenges faced by trade policy makers is to find out the employment implications of their policies. Especially, for a country like India where quality and quantity of jobs are fluctuating due to the changing structure of the economy. To estimate this impact from structured data updated input-output tables at country-level is required. Employment elasticities can then be calculated more precisely. This helps the policy makers to design the incentive schemes, decide on the negotiating stance while finalizing RTAs etc. The structured data required for this purpose are dated in case of India. Hence, they cannot be used to estimate the elasticities with reasonable degree of precision. Big data methods can help in finding suitable proxies to estimate the **impact of changes in trade on employment**. Employment Volatility Index may be attempted to correlate trade with change in job opportunities.

Services trade especially in Mode 1 and Mode 2 are difficult to capture due to lack of mechanisms to capture cross-border flows. It can safely be stated that trade under these routes are at best under-reported, especially in developing countries like India. Major services falling under these categories would be IT&ITES, Consultancy, Legal, Medical Transcription, Health, Education and Tourism. If big data analytics can tap unstructured data and/or identify suitable proxies, more precise estimates may be obtained. These may then be correlated with forex flows data from RBI to validate the proxy. Services in these categories are more human capital intensive and hence require decisions as to how much should be invested in skill formation to cater to future requirements. Analysing text from major markets may also give an idea about emerging requirements in these sectors. India being one of the leading services exporters can immensely benefit from more precise estimates of services trade.

Another area where a lot of debate and discussion goes on in policy and other circles is the **contribution of SMEs in exports of India**. Due to lack of proper structured data, estimates available are a suspect. Government of India has a plethora of schemes to

nurture the SMEs for their employment potential. Such enterprises face a lot of constraints compared to their larger counterparts. For example, it is widely known that such firms are financially constrained. Further, in many of the competing countries they get a wide variety of targeted incentives. In order to design effective incentives for this sector, their contribution to exports has to be estimated more precisely. An attempt would be made to use big data techniques to estimate their contribution to exports. It would also provide suggestions for identifying export destinations and trading partners; regulatory policies, multi-modal least cost routing mechanisms; and pricing strategies for enhancing exports by MSME.

Enhancing Indian Exports and Imports: As an example, we can consider top 20 (or X) countries and their top 10 (or Y) export-import (EXIM) commodities. Further a 20x10 (or X x Y) matrix should be constructed to understand the trading partners for these products, traded volumes and India's position in producing such items. An effective export strategy should also consider how India's trading partner gains by engaging in a trading relationship with India. Further, country by country EXIM study, consumption of high import items, assessing their cost of landing and strategizing Indian export, production and pricing strategy to make an effective substitution for those countries can help in boosting targeted export from India. This requires a strong data analytic system backed with databases which capture up to date detailed and disaggregated trade information for all countries. This would help in creating meaningful export /manufacturing decision support systems. Further, this exercise can point out the reasons for decline in India's ratio of manufacturing export to GDP and provide recommendations for making targeted export penetration.

Integrating India in the Global Value Chain: The World Bank Group is helping developing countries catch the GVC wave and realize its benefits. Participation in global value chains (GVCs) can create jobs and enhance economic growth. In this regard, we would study the major 50 consumables and identify India's position in the product network and the role that India can play in the value chain. In turn, it would trace ways of increasing market reach and exportability. Centrality to GVC (GVC smile curve published by World Bank Study) will be an important determinant of country's export success. Identifying products and segments where Indian firms can get integrated in GVCs, and the key factors constraining the integration will be very effective for formulating an export strategy.

Impact of Trade War and Global Trade Treaties: Countries have begun to agree on terms that helps them trade with each other. Over the years, trade treaties have been evolving creating free trade agreements, trade associations, tariff and non-tariff barriers (NTBs), etc. During the past year, imposition of tariffs by countries beyond the limits permitted by the WTO and retaliation by the affected countries has led to a trade war. However, this is likely to opportunities for India. A detailed study on how global sourcing patterns would shift on account of the trade war, and whether India can

replace some of the existing suppliers, is an issue of considerable contemporary relevance. Big data analytics can be deployed for such a study.

Logistics Industry in India: While the logistics industry is a sunshine sector in India, many challenges and risks deter its development. Research in this area would entail identifying the challenges and loopholes adversely affecting growth in logistics and suggesting ways to mitigate them.

Big Data and Machine Learning on Assessing risk of countries we export: There are ways to use Big data and Machine learning tool to regularly assess and predict different risk (for example, investment risk, economic policy uncertainty risk etc.) for countries with which we have substantial trade relations. Assessing and predicting these risks well in advance will help India to position its export accordingly.

11.3 Recommendations

All the above can be done with the help of a well modelled **Big Data analytics system**. **However, such a system is completely missing in India. We don't even have a good forecasting model!** An intelligent data analytics, machine learning and prediction system, backed with data from various sources, is crucial for a sustainable export strategy. Such a system is also essential for anticipating global happenings in advance, thereby enhancing the possibility of planning for sudden export headwinds. The big data analytics system can also be useful for formulating a short-term, as well as long-term, EXIM strategy. This should not be a one-time exercise, but should be undertaken on a continuous basis. Department of Commerce should directly engage a reputed institution, outside the ministry, which has expertise in trade, economics and big data analytics. This institute once engaged should showcase the power of harnessing big data analytics and how insight so developed can be utilized. Further, the institute should develop long term training of officials of the ministry on big data analytics for generating awareness on the scope of big data. This will help sustain the initiative.

12

Investment Promotion Agencies and SEZs



12. Investment Promotion Agencies and SEZs

A. Building an empowered Investment Promotion Agency (IPA) in India – Invest India ++

“An IPA which is proactive in targeting investment will be better able to attract the kind of investment that is most appropriate to the country's longer-term development objectives than to those IPAs that are inactive, or which use a broad-brush all-industry approach, and whose countries may otherwise therefore receive disparate, non-complementary and unnetworkable kinds of investment. For example, countries such as Malaysia and Singapore no longer focus on attracting labour-intensive industries; instead, with a fully employed and trained labour force, they now focus on promoting higher value added and skill-intensive activities.

Implementation of the targeted promotion approach requires an IPA to directly contact a specific firm or group of firms within an industry to present the advantages for them of investing in the IPA's country.”— Survey of best practices in Investment Promotion, UNCTAD, 1999

12.1 Global Overview and India's Relative Performance

- i. Investment Promotion Agencies (IPAs) have bloomed in all major economies across the world. IPAs typically take up functions like strategy and policy formulation, lead generation, investment facilitation, investment execution, and providing post-investment care.
- ii. An Oxford study (Harding, Javorcik) found that IPAs led to higher FDI flows to countries in which information asymmetries are likely to be severe. A dollar spent on investment promotion is found to increase FDI inflows by USD 189.
- iii. These agencies can broadly be categorized into three types – i) FDI focused, ii) Domestic Direct Investment (DDI) focused, and iii) Focusing on both FDI and DDI. While Malaysia, Singapore, and Ireland, which are considered to have the best performing IPAs are only FDI focused, other economies like New Zealand and Turkey have IPAs focusing on both FDI and DDI.
- iv. According to Department for Promotion of Industry and Internal Trade (DPIIT), FDI equity inflows in India in 2018-19 stood at US\$ 44.37 billion.

Table 12.1: FDI Equity Inflows by Country (April, 2000-March, 2019; USD Billion)

	Country	Value (in USD billion)	% of total inflows
1	Mauritius	134.46	32%
2	Singapore	82.99	20%
3	Japan	30.27	7%
4	Netherlands	27.35	7%
5	U.K.	26.78	6%
6	U.S.A.	25.55	6%
7	Germany	11.70	3%
8	Cyprus	9.86	2%
9	U.A.E.	6.65	2%
10	France	6.64	2%

Source: Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry

Table 12.2: FDI Equity Inflows by Sector (April, 2000-March, 2019; USD Billion)

	Sector	Value (in USD billion)	% of total inflows
1	Services	74.14	18%
2	Computer Software and Hardware	37.23	9%
3	Telecommunications	32.82	8%
4	Construction Development	25.04	6%
5	Trading	23.02	5%
6	Automobile Industry	21.38	5%
7	Chemicals (other than Fertilisers)	16.58	4%
8	Drugs and Pharmaceuticals	15.98	4%
9	Infrastructure Activities	14.80	4%
10	Power	14.31	3%

Source: Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry

Note: Services includes Financial, Banking, Insurance, Non-Financial / Business, Outsourcing, R&D, Courier, Tech. Testing and Analysis

- v. Currently, India is among the most open economies globally for foreign investment. It allows FDI of up to 100% of the equity shareholding in most sectors under the automatic route.
- vi. Apart from making the economy FDI friendly, the DPIIT set up Invest India in 2009 as the national investment promotion and facilitation agency. Invest India's mandate is:
 - to focus on sector-specific investor targeting and development of new partnerships to enable sustainable investments in India.
 - actively work with Indian states to build capacity
 - bring in global best practices in investment targeting, promotion and facilitation areas.

12.2 Key Challenges faced by India's IPA, i.e., Invest India

i. Lack of powers with Invest India

Invest India has only an advisory role and no executive powers. The agency has done well to disseminate information and promote investment, but its lack of executive powers does not allow it to actualise the claim of a single window system for potential investors. As such, investors may have to go to several agencies to get their clearances.

ii. Lack of one-to-one marketing

Current government setup doesn't allow officials to target big players looking to locate to a new site. The fear of facing disciplinary scrutiny among officials at important levels of decision making, even when they take measures which are transparent and straight forward, has put a certain check on their ingenuity, innovative thinking and pace of decision making. It is noteworthy that there are many competing countries for quality investments and most other leading destinations have frameworks which are decisive and somewhat flexible albeit with clear guidelines.

iii. Lack of active approach amidst "China+1" policy of investors

Going to where the investors are, we need our people in China, USA, Singapore etc. The best IPAs have a global reach. Invest India's role has been reduced to passive methods of marketing of the Indian economy and facilitation for investors who show interest in the country; it does not have the autonomy and the capacity to undertake this active role.

iv. Other functional restraints for Invest India

Invest India does not have the degree of autonomy from the Government that would empower it to make independent investment decisions. Its functioning is dependent on the views of the Ministry of Commerce. It also lacks the required budgetary corpus to undertake long term planning (current funding is on project basis). It hires employees on a short term basis and hence there is not enough capacity building of experienced professionals in the niche function of investment promotion. The body also lacks adequate office space that would give way to a single window clearance system by means of co-location.

12.3 IPAs across the world: A comparison

Table 12.3: Investment Promotion Agencies Comparison

Country IPA	Organization	Power	Leadership	Linkages	Outreach
Malaysia Investment Development Authority	<ul style="list-style-type: none"> • Statutory body • Fully funded by the government 	<ul style="list-style-type: none"> • Hand-holding to investors from pre-establishment through to the post-establishment • Empowered to grant incentives to specific companies. • Weekly meets for clearing applications. Representative from Finance Ministry sits to approve applications on the spot • Different types of talent in promotion & facilitation departments 	<ul style="list-style-type: none"> • 14-member board of directors (CEOs of major private cos., Head of chambers of commerce, representative s from Ministry of Finance, International Trade and Industry, Central Bank) 	<ul style="list-style-type: none"> • Senior representatives from key government agencies crucial from investor point of view are stationed at MIDA's HQ in Kuala Lumpur • Cooperates with Federal and State agencies for obtaining all necessary approvals, facilitate visits and site investigations 	<ul style="list-style-type: none"> • 20 overseas offices and 12 state offices. • Business Information Centre for consultations and a Resource Centre for information and knowledge • The state of Penang for example has its own IPA, investPenang. Investment promotion also occurs at the city level. Kuala Lumpur has its own IPA, InvestKL
China Investment Promotion Agency	<ul style="list-style-type: none"> • Government department under MOFCOM (Commerce Ministry) • Reporting to the Secretary for Commerce and Economic Development 	<ul style="list-style-type: none"> • Responsible for inbound and outward investment • Coordinates with International Economic Orgs., Foreign IPAs, Business Associations and guide State/Regional IPAs • Organize National/International Trade Promotion Events • Decisions related to Investment attraction/facilitati 	• N/A	<ul style="list-style-type: none"> • Guides a network of 32 city-level IPAs (Shanghai, Shenzhen, Guangzhou, Qingdao). • These IPAs are more deeply involved in making policies and strategies for promotion of investment in their cities. 	<ul style="list-style-type: none"> • Network staff (using Economic Trade Offices) and consultants as representatives in business cities worldwide • Selects prominent persons (MNC CEOs, entrepreneurs) in Hong Kong (residents and foreigners) as ambassadors who will act

		on taken by a separate body NDRC			as third party advocates
Singapore Economic Development Board	<ul style="list-style-type: none"> • Government agency under the Ministry of Trade and Industry 	<ul style="list-style-type: none"> • Lead government agency for planning and executing strategies to enhance Singapore's position as a global business • Has freedom to conduct commercial affairs without being bound by governmental rules and regulations. 	<ul style="list-style-type: none"> • Board has representative s from Government, quasi-government Trade Unions, Private Industry. • Board members use their network in connecting investors with good quality workforce. 	<ul style="list-style-type: none"> • Direct linkage with 10 ministries (Finance, Housing, IT, Trade, Tourism, Science and Technology) • Works closely with all government bodies to facilitate investments on various fronts: tax, immigration, housing, infrastructure, education etc. 	<ul style="list-style-type: none"> • Maintains offices in NY, SF, LA, Chicago, Washington DC, Boston, London, Paris, Frankfurt, Milan, Stockholm, Hong Kong, Tokyo, Osaka, and Jakarta.
Ireland Investment Development Authority	<ul style="list-style-type: none"> • Earlier part of the Department of Industry & Commerce. • Now an Autonomous state-sponsored body 	<ul style="list-style-type: none"> • Single agency for FDI in Ireland. • Provide services like funding support for investors, property solutions, branding and media solutions • Facilitating introductions to peer companies 	<ul style="list-style-type: none"> • Board mostly contains top executives of major private companies, govt. members, professors, professional advisors 	<ul style="list-style-type: none"> • Linkages with Government departments, Chamber of Commerce, Employer and Employee representative bodies, Professional advisors, Educational institutions and 	<ul style="list-style-type: none"> • Regional offices around the country. • Overseas offices in Mumbai, Singapore, Beijing, Tokyo, Sydney, Boston, Chicago, Toronto,

		<p>and industry groups.</p> <ul style="list-style-type: none"> Organize customized visits to Ireland for potential investors. 		regulatory bodies	<p>Moscow, London etc.</p> <ul style="list-style-type: none"> Role of overseas executives is of marketing the benefits of investing in Ireland to target investors. Leverages embassy network to deepen penetration in target markets
Indonesian Investment Coordinating Board		<ul style="list-style-type: none"> Independent agency Reporting directly to the President. <ul style="list-style-type: none"> Tied up with various ministries to have centralized authority of issuing majority of licenses Directly responsible for issuing investment approvals Pass regulations for investment in the country Contribute to the national investment policy 	<ul style="list-style-type: none"> Chairman of the board is the former minister of trade 	<ul style="list-style-type: none"> "One Stop Service Centre" which brings together 22 different ministries and issues over 30 licenses The OSSC also has a physical office where representatives from 15 government departments sit for consultation and processing applications 	<ul style="list-style-type: none"> Set up Indonesia Investment Promotion Centres (IIPCs) in 8 countries Separate IIPCs work closely with governments, business associations, and chambers of commerce of the respective countries.

Mauritius Economic Development Board	<ul style="list-style-type: none"> • Statutory body through Economic Development Board Act 2017 • Reporting directly to the Prime Minister. 	<ul style="list-style-type: none"> • Inward and outward investment promotion and facilitation • Contribution to economic policy of the country • Main body for country branding • Responsible for business facilitation - ensuring swift implementation by eliminating administrative delays • Country/Region-wise team 	<ul style="list-style-type: none"> • Board mostly contains industrialists and sector experts, and 2 government representative s. 	<ul style="list-style-type: none"> • Single authority for support for investors above MUR 20 Million • E-licensing platform is being created as a central repository of all business licenses 	<ul style="list-style-type: none"> • Has a head office and a separate occupation permits unit. • Overseas offices in India, South Africa, and France. • Enters into MoUs and Investment Promotion and Protection Agreements with target nations
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12.4 Policy recommendations to realise Invest India ++

i. Providing autonomy by changing reporting structures

- The body must be responsible to an apex decision making body, headed by a select set of Ministers who can approve investment, to provide it the flexibility and autonomy to make investment decisions.
- It should be given the freedom to conduct commercial affairs outside the bound of general government rules.
- It should be empowered to grant incentives in cases meeting pre-defined criteria and a mechanism should be put in place for time-bound disposal of applications.

ii. Council of Ministers for Investment Decisions

- A supreme Council tentatively comprising the Minister of Home Affairs, Finance and Commerce and Industries should be entrusted with the power to take investment decisions. This function can also be served by Cabinet Committee on Investments.
- Approval from such a council will ensure speedy implementation of special investment proposals which meet some pre-defined criteria (employment, technology, investment quantum etc.).

iii. Strengthening the leadership by bringing in multi-stakeholder experts

- Board of Directors should have representation of all relevant central ministries, employee-bodies, education institutions, and industrial bodies to provide their necessary services and inputs for investment decisions.

iv. Increasing linkages with states and other central departments

- Effectively coordinate with grid of State IPAs
- Depute senior officers from the relevant departments of various states and centre to a physical office of the IPA for speedy resolution of applications
- Institute e-licensing portal for providing the major licenses and state approvals on one platform

v. Build a world-class war room

- The way to realize single window is co-location. Representatives from relevant ministries and states should be stationed in a single war-room.
- Larger space should be provided to Invest India++. This is needed for high quality conference rooms, delegation rooms and offices for staff.
- They should be aided with state-of-the-art information systems which provide latest status of availability of assets, investment opportunities and status of approvals.

vi. Instituting an active outreach strategy

- The body should effectively leverage commercial representatives in Indian embassies for sustained relationships as a part of outreach strategy to potential investors
- It should have overseas offices in some strategically important financial centres globally

vii. Attract long-term talent

- Invest India++ should be allowed to hire long-term employees. Currently Invest India can hire people for 3-year terms.
- Longer contracts will ensure better alignment of goals of employees and the body resulting into better productivity.

B. SPECIAL ECONOMIC ZONE

Large tracts of land are lying vacant in some of the SEZs as detailed in the Annex VIII.1. Such vacant lands provide an immense potential for establishing new units, especially in manufacturing sector.⁴¹

India is one of the fastest growing economies of the world and this fact is reflected in the performance of the SEZs over the years. Investments, exports and employment generated in SEZs have grown significantly over the years. Since the enactment of SEZ Act in 2005, Investments have grown from USD 0.91 billion in 2005-06 to more than USD 73 billion in 2018-19. Further exports have risen from USD 5.08 billion in 2005-06 to more than USD 100 billion in 2018-19 and cumulative employment in SEZs grew significantly from 1.3 lakh persons in the year 2005-06 to close to 20 lakh persons at present.

For smooth functioning of SEZs in India, we have two tier mechanism in terms of approval under SEZ law i.e. Unit Approval Committee for units at zone level and Board of Approval for Developers /Co-developers at Department level.

The SEZ law provides many incentives and facilities offered to the units in SEZs for attracting investments into the SEZs, including foreign investment Duty free import/domestic procurement of goods for development, operation and maintenance of SEZ units, Exemption from Central Sales Tax, Exemption from Service Tax and Exemption from State sales tax.

These have now subsumed into GST and supplies to SEZs are zero rated under IGST Act, 2017, Other levies as imposed by the respective State Governments, Single window clearance for Central and State level approvals. The major incentives and facilities available to SEZ developers includes Exemption from customs/excise duties /GST for development of SEZs as well as for authorized operations approved by the BOA (Section 7, 26 and Second Schedule of the SEZ Act).

In recent past Government of India has taken some Initiatives in SEZs to ensure maximum investment in SEZs such as Minimum Land Area requirement for setting up of new SEZs has been reduced to 50% for Multi-product and Sector-specific SEZs, Sectoral broadbanding has been introduced to encompass similar / related areas under the same Sector. A new sector 'agro-based food processing' sector has been introduced to encourage agro-based industries in SEZs. Dual use of facilities like Social & Commercial infrastructure by SEZs and non-SEZs entities has been allowed in order to make SEZ operations more viable, Online processing of various activities relating to SEZ Developers and Units has been introduced for improving ease of doing business.

⁴¹Refer to Annex VIII for details about vacant SEZs.

Regulations have also been relaxed to allow authorized employees of IT/ITES units in SEZ to "Work from Home" or from a place outside the SEZ unit.

Besides the aforesaid initiatives, Department of Commerce periodically reviews the performance of SEZs and has undertaken initiatives to address challenges through necessary amendments in existing policy framework in consultation with various stakeholders. Initiatives are also undertaken to enhance the ease of doing business for SEZ Developers as well as SEZ units.

The Department of Commerce, in consultation with stakeholders including Department of Revenue is also examining the recommendations made by the Baba Kalyani Committee set up to reviewing SEZ law to make amendments to the SEZ scheme to develop it to a growth engine for overall economic activities in general and exports in particular. This could also make the scheme more attractive and result in further demand for vacant tracts of land, especially from manufacturing units.

References

Aguiar, A., Narayanan, B. and McDougall, R., 2016. An Overview of the GTAP 9 Database. *Journal of Global Economic Analysis*, 1(1), pp. 181-208.

Aseng, A., 2017. Tax Amnesty Implementation in Selected Countries and Its Effectivity. In: Asia-Pacific International University, *5th International Scholars Conference*. Saraburi, Thailand, 30-31 October 2017.

Basu, K., 2018. The Rise of Trump and an Agenda for Regulatory Reform. *Journal of Policy Modelling*, 40(3), pp.546-558.

Bhunia, P., 2018. *MAS Issues Guidelines to Allow use of Innovative Technology Solutions for Customer Onboarding*. [online] Available at: <<https://www.opengovasia.com/mas-issues-guidance-to-allow-use-of-innovative-technology-solutions-for-customer-on-boarding/>> [Accessed 21 October 2019].

Bollen, J. and Rojas-Romagosa, H., 2018. *Trade Wars: Economic impacts of US tariff increases and retaliations, an international perspective*. [online] CPB Netherlands Bureau of Economic Policy Analysis. Available at: <<https://www.cpb.nl/en/node/159516#docid-159519>> [Accessed 21 October 2019].

Boston Consulting Group and Confederation of Indian Industry, 2016. *Weaving the Way: Breakout Growth Agenda for the Indian Apparel, Made-ups and Textile Industry*. s.l.: Boston Consulting Group and Confederation of Indian Industry.

Chinoy, S. and Jain, T., 2018. What Drives India's Exports and What Explains the Recent Slowdown? New Evidence and Policy Implications. In: National Council of Applied Economic Research, *India Policy Forum*. New Delhi, 10-11 July 2018.

Chokshi, M., Mongia, R. and Wattal, V., 2015. Drug Quality and Safety Issues in India. *Indian Council for Research on International Economic Relations*, [online] Available at: <https://icrier.org/pdf/Working_Paper_310.pdf> [Accessed 21 October 2019].

CLSA, 2018. *Rise to the Challenge: Thai Trade and Tourism*. CLSA.

Deloitte, 2018. *2018 Global life sciences outlook, Innovating life sciences in the fourth industrial revolution: Embrace, build, grow.* s.l.: Deloitte.

Devarajan, S., 2018. How to fight a trade war: turn the other cheek. *Future Development*, [blog] 13 November. Available at: <<https://www.brookings.edu/blog/future-development/2018/11/13/how-to-fight-a-trade-war-turn-the-other-cheek/>> [Accessed 21 October 2019].

Devarajan, S., et al., 2018. Traders' Dilemma: Developing Countries' Response to Trade Disputes. Policy Research Working Paper WPS8640. *World Bank*, [online] Available at: <<http://documents.worldbank.org/curated/en/115171541615454756/Traders-Dilemma-Developing-Countries-Response-to-Trade-Disputes>> [Accessed 21 October 2019].

DPIIT, Ministry of Commerce and Industry, 2019. *Fact Sheet on Foreign Direct Investment*, New Delhi: Ministry of Commerce and Industry.

Dubbudu, R., 2015. Voluntary Disclosure of Black Money – Comparing 1997 & 2015. *Factly*, [online] Available at: <<https://factly.in/voluntary-disclosure-of-black-money-comparing-1997-2015/>> [Accessed 19 February 2019].

Edelweiss, 2018. *Pharmaceuticals: Evolution then, Transformation now*. Edelweiss.

Federation of Indian Chambers of Commerce & Industry and IMS Health India, n.d.. *Medical Value Travel in India: Enhancing Value in MVT*. [pdf] Mumbai: Federation of Indian Chambers of Commerce & Industry. Available at: <<http://www.ficci.in/Medical-Value-Travel-Report.pdf>> [Accessed 21 October 2019].

Federation of Indian Chambers of Commerce & Industry and Wazir Advisors, 2016. *Global Shifts in Textile Industry and India's Position*. [pdf] Mumbai: Federation of Indian Chambers of Commerce & Industry. Available at: <<http://ficci.in/spdocument/20817/3-FICCI-TAG-2016-Whitepaper.pdf>> [Accessed 21 October 2019].

Finance Ministry, 2017. Response to To Lok Sabha Starred Question No. *19, Raised by Shri Pr. Senthil Nathan: Shri Bharathi Mohan R.K., Hon'ble Members Of Parliament, For Reply On 15 December. New Delhi: Lok Sabha.

Frost & Sullivan, 2017. *Actionable Strategy and Roadmap for the Biotechnology and Genomics industries in India*. Frost & Sullivan.

Gurnaney, T. and Khan, D., 2018. What went wrong with the Indian handset makers and how can it be fixed. *Economic Times*, [online] 14 August. Available at: < <https://telecom.economictimes.indiatimes.com/news/what-went-wrong-with-the-indian-handset-makers-and-how-can-it-be-fixed/65381732> > [Accessed 21 October 2019].

Hancock, T., 2018. Chinese investment into US biotech start-ups soars. *Financial Times*, [online] 1 July. Available at: < <https://www.ft.com/content/7b045aa2-7cef-11e8-bc55-50daf11b720d> > [Accessed 21 October 2019].

Harding, T., and Javorcik, B. S., 2011. Roll Out the Red Carpet and They Will Come: Investment Promotion and FDI Inflows. *The Economic Journal*, 121(557), pp. 1445-1476.

He, L., 2016. Understanding Argentina's New 'Mega' Tax Amnesty Law. *The Bubble*, [online] 11 July. Available at: <<http://www.thebubble.com/understanding-argentinas-new-mega-tax-amnesty-law/>> [Accessed 22 October 2019].

Hertel , T., ed. 1997. *Global Trade Analysis: Modelling and Applications*. London: Cambridge University Press.

Huswara, Benjamin & Tandjung and Herbert Smith Freehills, 2016. *Indonesia Tax Amnesty Update: Further implementing regulations provide more clarity as phase one ends*. Jakarta: Huswara, Benjamin & Tandjung.

ICICI Securities., 2017. World Class Health Infra at Competitive Prices to fuel Indian Medical Tourism Boom. *Market Wrap*, [blog] n.d.. Available at: < <http://content.icicidirect.com/mailimages/MedicalTourismFeb17.htm> > [Accessed 21 October 2019].

India Brand Equity Foundation, 2018. *Consumer Durables*, s.l.: India Brand Equity Foundation.

Japan Electronics and Information Technology Industries Association, 2017. *Production Forecasts for the Global Electronics and Information Technology Industries*, s.l.: Japan Electronics and Information Technology Industries Association.

Kantar IMRB, 2018. *Electronics Manufacturing Summit 2018 -- Proceedings Report*. New Delhi, India, 17 January 2018. New Delhi: Manufacturers' Association for Information Technology.

Kar, D., 2010. *The Drivers and Dynamics of Illicit Financial Flows from India: 1948-2008*. Washington DC: Global Financial integrity.

Lin, J., and Wang, X., 2018. Trump economics and China-US trade imbalances. *Journal of Policy Modelling*, 40(3), pp. 579-600.

Mashelkar, R., 2003. *Report of the Expert Committee on A Comprehensive Examination of Drug Regulatory Issues, Including the Problem of Spurious Drugs*. New Delhi: Ministry of Health and Family Welfare, Government of India.

Mathur H., 2018. The UPI Wars – Who's the Boss?. *Razorpay*, [blog] 14 October. Available at: <<https://razorpay.com/blog/the-upi-wars-whos-the-boss/>> [Accessed 21 October 2019].

Ministry of Electronics and Information Technology, 2017-18. *Annual Report*. New Delhi: Ministry of Electronics and Information Technology.

Ministry of Electronics and Information Technology, Government of India, 2019. *National Policy on Electronics 2019*. [online] Available at: <https://meity.gov.in/writereaddata/files/Notification_NPE2019_dated25.02.2019.pdf> [Accessed 21 October 2019].

Ministry of Finance, Department of Economic Affairs, 2018. Industry and Infrastructure. In: *Economic Survey of India*, 2, pp. 120-147. New Delhi: Government of India.

Ministry of Tourism, Government of India, 2018. *India Tourism Statistics 2018*. New Delhi: Government of India. Available at: <http://tourism.gov.in/sites/default/files/Other/ITS_Glance_2018_Eng_Version_for_Mail.pdf> [Accessed 21 October 2019].

MyInfo, Singapore Government, 2019. *Frequently Asked Questions*. Available at: <https://www.ifaq.gov.sg/MyInfo/apps/fcd_faqmain.aspx> [Accessed 21 October].

National Institute of Financial Management, 2012. *Study on Unaccounted Income/ Wealth Both Inside and Outside the Country*. New Delhi: Central Board of Direct Taxes.

National Science Foundation, 2018. *Science & Engineering Indicators 2018*. s.l.: National Science Foundation.

Oxford Business Group, n.d.. *Trillions declared through Indonesia's tax amnesty programme*. s.l.: Oxford Business Group. Available at: < <https://oxfordbusinessgroup.com/analysis/taxing-questions-amnesty-programme-trigger-step-change-tax-compliance> > [Accessed 19 February 2019].

Oxford Economics and Global Infrastructure Hub, 2017. *Global Infrastructure Outlook*. Oxford: Global Infrastructure Hub.

Padmanabhan, A., Reddy, R. S. and Sharma, S., 2017. *Modern Biotechnology and India's Governance Initiatives*, s.l.: Carnegie India.

Panda, S. and Asrani, C., 2018. To bridge the digital divide, fix the phone industry first. *Financial Express*, [online] 25 August. Available at: < <https://www.financialexpress.com/opinion/to-bridge-the-digital-divide-fix-the-phone-industry-first/1291504/> > [Accessed 21 October 2019].

Pandey, T., 2000. The Evolution of Income Tax. *Hindu Business Line*, [online] 14 February. Available at: < <https://www.thehindubusinessline.com/todays-paper/tp-others/article29052871.ece> > [Accessed 21 October 2019].

Pani, P., 2018. Budget Idea That Worked: VDIS. *Hindu Business Line*, [online] 1 February. Available at: < <https://www.thehindubusinessline.com/economy/budget/budget-idea-that-worked-vdis/article22625579.ece> > [Accessed 21 October 2019].

Refinitiv, 2017. *KYC compliance: the rising challenge for financial institutions*. Thomson Reuters.

Robinson , S. and Thierfelder, K., 2018. NAFTA collapse, trade war and North American Disengagement. *Journal of Policy Modelling*, 40(3), pp. 614-635.

S&P Global Ratings, 2018. *India Credit Spotlight 2018: Growth Prospects Amid Macro Risks*. Standard and Poor's Financial Services.

Saksena, D., 2017. PMGKY a flop? Why Black Money Holders Don't Mind Taking on the I-T department. *Money Control*, [online] 30 March. Available at: <<https://www.moneycontrol.com/news/business/economy/pmgky-flop-why-black-money-holders-dont-mind-taking-on-the-i-t-department-2249931.html>> [Accessed 22 October 2019].

Salvatore , D. and Campano, F., 2018. Simulating Some of the administration's trade policies. *Journal of Policy Modelling*, 40(3), pp. 636-646.

Salvatore , D., 2018. TrumpEconomics: Overview of effects on the United States and the world. *Journal of Policy Modelling*, 40(3), pp. 480-488.

Salvatore, D., ed., 2018. TrumpEconomics: Effects on the United States and the World. *Journal of Policy Modelling*, 40(3), pp.477-646.

Stiglitz, J., 2018.Trump and Globalization. *Journal of Policy Modelling*, 40(3), pp 515–528.

Texprocil, 2018. *Export Statistics of Textile and Clothing*. [pdf] s.l.: Texprocil. Available at: <http://texprocil.org/statistics/Export_Statistics_Country_wise.pdf> [Accessed 22 October 2019].

The Lab, International Labour Organization, 2017. *From Obligation to Opportunity: A market systems analysis of working conditions in Asia's garment export industry*. s.l.: International Labour Organization. Available at: <https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/meetingdocument/wcms_582555.pdf> [Accessed 21 October 2019].

Thomson Reuters, 2017. *Argentina says USD 116.8 billion Declared in Record Tax Amnesty*. [online] Available at: <<https://www.reuters.com/article/us-argentina-tax-amnesty-idUSKBN17630O>> [Accessed 22 October 2019].

Torsekar, M., 2018. China's Changing Medical Device Export. *Journal of International Commerce and Economics*, [online] Available at: <https://www.usitc.gov/publications/332/journals/china_medtech_jice_508_compliant.pdf> [Accessed 22 October 2019].

TPA Global, 2017. *Argentina Succeeds With Tax Amnesty Programme*. TPA Global, [online] Available at: <<https://www.tpaglobal.com/dv/news28785/argentina-succeeds-with-tax-amnesty-programme>> [Accessed on 19 February 2019].

UBS, 2018. *China's Biotech Revolution*. UBS, [online] Available at: <<https://www.ubs.com/global/en/wealth-management/chief-investment-office/market-insights/regional-outlook/2018/china-biotech.html>> [Accessed 22 October 2019].

Veri5 Digital, 2019. *Veri5 KYC Video ID*. Veri5 Digital, [online] Available at: <<https://veri5digital.com/veri5-kyc-video-id/>> [Accessed 22 October 2019].

World Health Organization Country Office for India, 2017. *Medical Device Manufacturing in India - A Sunrise*. [pdf] Available at: <https://invest-india-revamp-static-files.s3.ap-south-1.amazonaws.com/s3fs-public/Medical%20Device%20-Manufacturing%20in%20India%20-%20A%20Sunrise_0.pdf> [Accessed 22 October 2019].

World Trade Organization, 2015. *Trade Policy Review*. Geneva: World Trade Organization.

World Trade Organization, 2018. *World Trade Statistical Review 2018*. World Trade Organization, [online] Available at: <https://www.wto.org/english/res_e/statis_e/wts2018_e/wts18_toc_e.htm> [Accessed on 22 October 2019].

World Travel and Tourism Council, 2018. *Travel & Tourism Economic Impact 2018: India*. World Travel and Tourism Council, [online] Available at: <<https://www.wttc.org/economic-impact/country-analysis/country-reports/>> [Accessed on 22 October 2019].

13

Annexures



ANNEXURES

Annex I

Annex I.1

K-44020/40/2018-TPD

Government of India

Ministry of Commerce & Industry

Department of Commerce

New Delhi, 22nd September, 2018

NOTIFICATION

Subject: Constitution of a High Level Advisory Group (HLAG) to make recommendations on pursuing opportunities, addressing challenges and finding a way forward amidst emergent issues in the contemporary global trade scenario.

With the approval of the Hon'ble CIM, a High Level Advisory Group (HLAG) is hereby constituted with the aforementioned objective and the following composition:

1	Dr. Surjit S. Bhalla Director of Oxus Research and Investments	Chair
2	Mr. Subramaniam Jaishankar Former Foreign Secretary President, Global Corporate Affairs, TATA Group	Member
3	Mr. Rajeev Kher Former Commerce Secretary and Member Competition Appellate Tribunal	Member
4	Mr. Sanjeev Sanyal Principal Economic Advisor, Government	Member
5	Mr. Adil Zainulbhai Chairman, Quality Council of India	Member
6	Dr. Harsha Vardhana Singh Former Dy. Director General WTO	Member
7	Dr. Shekhar Shah Director General, NCAER	Member
8	Dr. Vijay Chaulhalwale Foreign Policy Advisor	Member
9	Dr. Pulok Ghosh IIM Bangalore	Member
10	Mr. Jayant Dasgupta Former Ambassador of India to the WTO	Member
11	Mr. Rajiv K. Luthra Founder & Managing Partner, Luthra & Luthra	Member
12	Mr. Chandrakil Banerjee Director General, CII	Member

CWTQS, New Delhi shall provide the secretariat to the HLAG

2 The Terms of Reference (ToR) of the HLAG shall be as follows:

- (i) The HLAG shall pursue the key objective of examining the prevailing international trade dynamics, including, but not confined to, the rising protectionist tendencies, especially on the part of major economies, non-engagement by some countries on outstanding trade negotiation issues and commitments, including the Doha Development Agenda, and their insistence on pursuing negotiating mandates, in many cases prematurely and without efforts to build consensus and common understanding on new issues, and in light of this examination suggest a way forward for India, taking into account its interests and sensitivities and provide options for a balanced approach for the global community to build on achievements thus far in creating a conducive global trade framework and move forward in a harmonious and consensual manner that is acceptable to the larger global community.
- (ii) The Group may consider possible approaches and suggest a pragmatic framework for India's future engagement in international trade, and the manner in which it can play a proactive and constructive role in working with the community of Nations in exploring and building consensus on resolving emergent trade related issues and finding a way forward.
- (iii) The following indicative list of themes is listed for consideration of the Group:

THEME I: Boosting India's share and importance in Global Merchandise and Services Trade

- How can India boost its exports, both quantitatively and qualitatively, in a sustainable manner?
- What commodity and region specific strategies should India adopt to achieve this objective and address the challenges posed by the emerging world economic order?
- What strategy should India adopt to capture opportunities arising from major economies off-loading labour-intensive activities?

THEME II: Managing pressing bilateral trade relations.

- How should India position itself as it looks to strengthen bilateral / regional trade relations with different countries and trading blocks that often have contrasting and conflicting aspirations and sensitivities?
- What specific steps could be used for effective management of the consequences arising out of unprecedented de-stabilizing conflict oriented trade dynamics between major countries?

THEME III : Mainstreaming new age policy making

- Can exchange rate management be a medium to long term instrument in shaping trade objectives? What should be India's policy on exchange rates in light of this assessment, in the face of tariff-based negotiations on bilateral and multilateral forums become more challenging?
- How can India impact WTO's 'New Agenda'?

3. The HLAG will meet regularly over the next two months and make specific implementable recommendations in light of the above ToRs, including on each of the areas listed above, to facilitate the formulation of future trade policies.

4. The HLAG may invite Special Invitees whose inputs may be considered necessary.


(Mahendra Vikram Singh)
Under Secretary to Govt. of India
Tel: 23063916
Email: us7tpd-doc@nic.in

To

As per list attached

Annex I.2:
LIST OF MEETINGS

S. No.	Meeting	Date
1st Meeting		
1.	<p>Shri Sudhanshu Pandey and Shri Dammu Ravi from the DoC made a presentation on issues related to the three themes identified for HLAG, namely:</p> <ol style="list-style-type: none"> 1. Boosting India's share and importance in global merchandise and services trade; 2. Managing pressing bilateral relations; and 3. Mainstreaming new age policy making. 	03/10/2018
2nd Meeting		
2.	<p>1. Preliminary Assessment of Opportunities for India arising out of Section 301 Action by US by Shri Anwarul Hoda (Indian Council for Research on International Economic Relations (ICRIER));</p> <p>2. Market Revival & Increasing Foreign Investment into Indian Equity Markets by Nandita Agarwal Parker (Karma Capital) and Tejas Desai (Ernst & Young India); and</p> <p>3. Fund Management- Safe Harbour by Shri Tushar Sachade (PricewaterhouseCoopers India).</p>	17/10/2018
3rd Meeting		
3.	<p>1. Trade Facilitation and Logistics</p> <ul style="list-style-type: none"> • World Trade Organisation (WTO) Agreement on Trade Facilitation by Shri Dammu Ravi, Joint Secretary, DoC; • India Logistics by Shri Anant Swarup, Joint Secretary, DoC; and <p>2. Trade Facilitation in India: Recent Reforms and Way Forward by Dr. Naushad Forbes, Confederation of Indian Industry (CII).</p> <p>3. Trade Finance by Shri Tushar Sharma, Export-Import Bank of India (EXIM); and</p> <p>3. US-China Trade War, US- China: Trade Opportunities for India by Dr. Naushad Forbes, CII.</p>	02/11/2018
4th Meeting		
4.	<p>1. Pharmaceuticals</p> <ul style="list-style-type: none"> • Sectoral Presentations on Select Export Sectors (Pharmaceuticals, Biotechnology, Medical devices, Garments and Textiles) by Shri Adil Zainulbhai <p>2. Financial Services</p> <ul style="list-style-type: none"> • Financial Service Sector by Shri Sudhanshu Pandey, Additional Secretary, DoC; and • International Financial Service Centre – Hub for International Trade by Shri Dipesh Shah, Chief, Gujarat International Finance Tec-City International Financial Services Centre (GIFT IFSC). <p>3. Fund Managers</p> <ul style="list-style-type: none"> • Fund Management by Shri Rajesh Kumar Kedia, Director DoR, Central Board of Direct Taxes (CBDT). 	16/11/2018

5th Meeting

5. 1. Presentation by Shri Sandeep Kothari, Fidelity Investments and Tushar Sachade, PwC India, on Individual Fund Flows;
2. Presentation by Department of Commerce (DoC) on Trends and Challenges in Agricultural Exports;
3. Presentation by Shri Pankaj Mohindroo, Indian Cellular and Electronics Association (ICEA) on Cellular Mobiles Sector;
4. Discussion by Shri Rajeev Kher (HLAG Member) on Recommendations on Export Import Bank of India (EXIM Bank); and
5. Discussion by Dr.Pulok Ghosh (HLAG Member) on Data Driven Approach to Exports. 30/11/2018

6th Meeting

6. 1. Presentation on Taxation and Tax Reforms by Dr. Arvind Virmani;
2. Presentation on Sectoral Presentation on Electronics and IT Sector by Shri Rajiv Luthra; 10/12/2018
3. Presentation on Trade War, Impact and Policy choices' by Shri Rajesh Chadha, NCAER; and
4. Presentation on Round Tripping by Shri Rajiv Luthra;

7th Meeting

7. 1. Developing Electronics Manufacturing Ecosystem in India by Ms.Shagufta, US-India Strategic Partnership Forum (USISPF) and Mr. Harish Krishnan (CISCO Systems);
2. Building national Champions in mobile phones and IOT by Shri Hari Om, Lava International Ltd; 09/01/2019
3. Developing Policies in India to compete with economies like China by Shri Virat Bhatia, Apple India; and
4. India and the WTO Issues by Shri Harsha Vardhana Singh (HLAG Member).

8th Meeting

8. 1. Presentation on issues related to gold industry by Shri Ajay Mehra, Mehrasons Jewellers;
2. Presentation on creating/supporting national champions companies in reference to Paytm by Shri Vijay Shekhar Sharma, Paytm; and 22/01/2019
3. Presentation on building mobility for a billion people in reference to Ola by Shri Nimish Joshi, Ola.

9th Meeting

Draft reports

9. 1. Developing the offshore fund management industry in India by Shri Sanjeev Sanyal (summary presented by Ms. ArpithaBykere, Consultant, Department of Economic Affairs);
2. Boosting India's trade and international engagement by strengthening Exim Bank by Shri Rajeev Kher;
3. Pharmaceuticals, medical devices and biotechnology sector by Shri Adil Zainulbhai; 06/02/2019



4. WTO and India: overall strategy, and India and food security at the WTO by Dr. Harsha Vardhana Singh and Shri Jayant Dasgupta.

10th Meeting

Draft reports on the following topics were discussed:

10.	<ol style="list-style-type: none">1. Biotechnology Sector, Medical Devices Sector, Pharmaceutical Sector, Garments Sector, Textile Sector and a report on STEM Graduates in India by Shri Adil Zainulbhai2. Boosting India's Trade and International Engagement by Strengthening Exim Bank by Shri Tarun Sharma, General Manager and Regional Head, EXIM Bank3. Promotion of Manufacturing in Electronics and IT Sector in India, Round Tripping: Recommendations in Relation to Existing Legal Framework and Long Term Bonds- A case for India by Shri Rajiv Luthra4. Representations by Apple (Ultra-Mega / Key Projects with Large Revenue Potential), LAVA, Paytm and Ola presented by Shri Rajiv Luthra	20/02/2019
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11th Meeting

11.	Discussion on draft report	01/04/2019
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12th Meeting

12.	Discussion on draft report	24/04/2019
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Annex II

The GTAP is a comparative static model containing bilateral trade information, transport, and protection linkages for 57 production sectors across 140 countries/ regions. The production sectors include 14 in agriculture, 4 in minerals, 24 in manufacturing, and 15 in services. The following table provides mapping of 32 Model Sectors with 57 GTAP Sectors:

Annex II.1: Mapping of Model Sectors with GTAP Sectors

S. No	Sectors	Code	GTAP Model Sectors
1	Cereals	cereals	1.Paddy (pdr), 2. Wheat (wht), 3. Cereal grains nec (gro),
2	Oilseeds	oilseeds	5.Oil seeds (oilseeds)
			4.Vegetables, fruit, nuts, 6. Sugar cane, sugar beet,7. plant-based fibres, 8. Crops nec, 9. Cattle,sheep,goats,horses
3	Other Agriculture	othrAgri	10.Animal products nec, 11. Raw milk 12.Wool, silk-worm cocoons, 13. Forestry 14. Fishing
4	Crude Oil and Minerals	cog	15. Coal, 16. Oil, 17. Gas,
5	Other Minerals	omn	18. Minerals, n.e.c
			19.Meat: Cattle,Sheep,Goats,Horse, 20.Meat products nec
6	Food Beverage & Tobacco	fbt	21.Vegetable oils and fats, 22. Dairy products, 23. Processed rice, 24. Sugar, 25. Food products nec, 26. Beverages and tobacco products
7	Textiles	tex	27. Textiles (tex)
8	Wearing apparel	wap	28.Wearing apparel (wap)
9	Leather products	lea	29.Leather products (lea)
10	Wood products	lum	30.Wood products (lum)
11	Paper products, publishing	ppp	31.Paper products, publishing (ppp)
12	Petroleum, coal products	p_c	32.Petroleum, coal products (p_c)
13	Chemical,rubber,plastic prods	crp	33.Chemical, rubber,plastic prods (crp)
14	Mineral products nec	nmm	34.Mineral products nec (nmm)
15	Ferrous metals	i_s	35.Ferrous metals (i_s)

16	Metals nec	nfm	36. Metals nec (nfm)
17	Metal products	fmp	37. Metal products (fmp)
18	Motor vehicles and parts	mvh	38. Motor vehicles and parts (mvh)
19	Transport equipment nec	otn	39. Transport equipment nec (otn)
20	Electronic equipment	ele	40. Electronic equipment (ele)
21	Machinery and equipment nec	ome	41. Machinery and equipment, nec (ome)
22	Manufactures nec	omf	42. Manufactures, nec (omf)
23	Electricity, Gas & Water Supplies	egw	43. Electricity (ely), 44. Gas Manufacture, distribution (gdt), 45. Water (wtr)
24	Construction	cns	46. Construction (cns)
25	Trade	trd	47. trade (trd)
26	Transport, n.e.c	tpt	48. Transport, n.e.c (otp);
27	Sea Transport	wtp	49. Sea Transport (wtp);
28	Air Transport	atp	50. Air Transport
29	Communication	cmn	51. Communication (cmn)
30	Financial & Insurance services	fin	52. Financial Services nec (ofi), 53. Insurance (isr)
31	Business Services	obs	54. Business Services (obs)
32	Other Services	osr	55. Recreation and other services (ros); 56. PubAdmin/Defence/Educate (osg); 57. Dwelling (dwe)

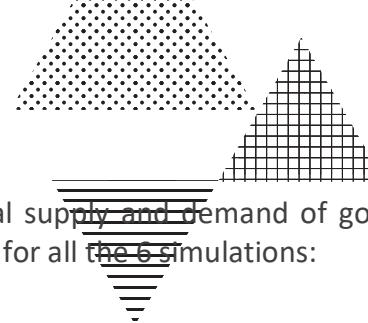
Source: GTAP Version 9 database

The following table provides mapping of 22 Model countries/regions with 140 GTAP countries/regions:

Annex II.2: Mapping of Model Country/Regions with GTAP Regions			
1.	United State of America	USA	USA
2.	China	China	China
3.	India	India	India
4.	ASEAN	ASEAN	Cambodia (KHM), Indonesia(IDN), Lao PDR (LAO), Malaysia(MYS), Philippines (PHL), Singapore (SGP), Thailand (THA), Viet Nam (VTN)
5.	NIEs	NIEs	Hong Kong (HKG), South Korea (KOR) and Taiwan (TWN)
6.	Japan	Japan	Japan
7.	Australia and New Zealand	ANZ	Australia (AUS), New Zealand (NZL)
8.	Bangladesh	Bangladesh	Bangladesh
9.	Sri Lanka	Sri Lanka	Sri Lanka
10.	Pakistan	Pakistan	Pakistan
11.	Other South & South-East Asia	OthS_SEAsia	Nepal (NPL), Rest of South Asia (XSA), Mongolia (MNG), Rest of East Asia (XEA), Brunei Darussalam (BRU)
12.	Canada		Canada (CAN)
13.	Mexico	MEX	Mexico(MEX)
14.	Brazil	BRA	Brazil
15.	America Other than North America	A_N	Argentina (ARG), Bolivia (BOL), Brazil(BRA), Chile (CHL), Colombia (COL), Ecuador (ECU), Paraguay (PRY), Peru(PER), Uruguay (URY), Venezuela (VEN), Rest of South America (XSM) Costa Rica(CRI), Guatemala (GTM), Honduras(HND), Nicaragua (NIC), Panama (pan) El Salvador (SLV), Rest of Central America (XCA), Caribbean (XCB), Dominican Republic (DOM), Jamaica (JAM), Puerto Rico (PRI), Trinidad and Tobago(TTO) and Caribbean (XCB)
16.	United Kingdom	UK	Great Britain (GBR)
17.	European Union -26	EU26	Austria (AUT), Belgium (BEL), Cyprus (CYP), Czech Republic (CZE), Denmark(DNK), Estonia (EST), Finland (FIN), France (FRA), Germany (DEU), Greece (GRC), Hungary(HUN), Ireland (IRL), Italy(ITA), Latvia (LVA), Lithuania (LTU), Luxembourg (LUX),

			Malta (MLT),Netherlands (NLD),Poland (POL),Portugal (PRT), Slovakia (SVK), Slovenia (SVN),Spain (ESP),Sweden (SWE), Bulgaria (BGR), Croatia (HRV), Romania (ROU)
18.	Rest of Europe	EUEFT	Switzerland (CHE), Norway (NOR), Rest of EFTA (XEF), Albania (ALB), Belarus, (BLR), Ukraine (UKR), Rest of Eastern Europe (XEE) Rest of Europe (XER)
19.	Middle East and North Africa	MENA	Bahrain (BHR), Iran Islamic Republic of (IRN), Israel (ISR), Jordan (JOR) ,Kuwait (KWT) Oman (OMN), Qatar (QAT),Saudi Arabia (SAU), Turkey (TUR), United Arab Emirates(ARE) Rest of Western Asia (XWS),Egypt (EGY), Morocco (MAR), Tunisia (TUN) and Rest of North Africa (XNF)
20.	South Africa	Africa	South Africa (ZAF)
21.	Rest of Africa	RoFAFRICA	Benin (BEN), Burkina Faso (BFA),Cameroon (cmr), Cote d'Ivoire (CIV), Ghana (GHA), Guinea(GIN), Nigeria (NGA), Senegal(SEN), Togo (TGO), Rest of West Africa (XWF), Rest of Central Africa (XCF), South Central Africa(XAC), Ethiopia (ETH), Kenya (KEN), Madagascar(MDG), Malawi (MWI), Mauritius (MUS), Mozambique (MOZ), Rwanda (RWA), Tanzania (TZA), Uganda (UGD), Zambia (ZMB), Zimbabwe (ZWE), Rest of Eastern Africa(XEC), Botswana (BWA), Namibia (NAM), Rest of South African Custom Union (XSC)
22.	Rest-of-World	ROW	Rest of Oceania (XOC), Russian Federation (RUS), Rest of North America (XNA), Kazakhstan (KAZ), Kyrgyzstan (KGZ),Rest of Former Soviet Union(XSU) Armenia (ARM), Azerbaijan (AZE), Georgia (GEO) and Rest of the World (XTW)

Source: GTAP Version 9 database



A trade war would impact GDP growth rate and trade flows through changes in the global supply and demand of goods and their associated price movements. The following table provides change in GDP of various countries for all the 6 simulations:

Annex II.3: Change in GDP (% change from base)

S. No.	Country/Region	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6
1	USA	-0.1517	-0.1628	-0.1634	-0.1628	-0.0044	-0.1575
2	China	-0.8860	-0.9259	-0.9959	-0.9277	0.3387	-0.5293
3	India	0.0855	-0.4119	-0.6881	-0.3991	0.8819	0.9690
4	ASEAN	0.0325	0.0361	0.0401	0.0361	0.0973	0.1199
5	NIEs	0.0336	0.0362	0.0381	0.0361	0.2442	0.2643
6	Japan	0.0076	0.0087	0.0090	0.0086	0.0671	0.0714
7	Australia and New Zealand	0.0222	0.0274	0.0295	0.0274	0.1125	0.1314
8	Bangladesh	0.1071	0.1313	0.1347	0.1314	-0.1668	-0.0322
9	Sri Lanka	0.0509	0.0670	0.0732	0.0667	-0.2545	-0.0603
10	Pakistan	0.0268	0.0290	0.0309	0.0290	-0.0758	-0.0374
11	Other South & South-East Asia	0.0036	0.0224	0.0205	0.0228	-0.0088	-0.0052
12	Canada	0.0406	0.0444	0.0464	0.0444	-0.0073	0.0327
13	Mexico	0.0378	0.0406	0.0419	0.0406	-0.0097	0.0281
14	Brazil	0.0431	0.0484	0.0503	0.0484	-0.0284	0.0142
15	America Other than N America	0.0430	0.0473	0.0494	0.0473	-0.0207	0.0220
16	United Kingdom	0.0138	0.0172	0.0193	0.0172	-0.0138	-0.0003
17	European Union -26	0.0103	0.0123	0.0138	0.0123	-0.0080	0.0020
18	Rest of Europe	0.0047	0.0050	0.0078	0.0050	-0.0048	-0.0006
19	Middle East and North Africa	0.0207	0.0229	0.0275	0.0229	-0.0135	0.0066
20	South Africa	0.0335	0.0399	0.0435	0.0399	-0.0223	0.0102
21	Rest of Africa	0.0289	0.0336	0.0380	0.0335	-0.0207	0.0074
22	Rest-of-World	0.0081	0.0055	0.0101	0.0056	0.0012	0.0091

Source: Authors' simulation based on the GTAP Model at NCAER.

Simulation 1: USA and China increase tariffs against each other up to 20% on mining and manufacturing sectors. Tariffs already above 20% remain stable at their existing rates.

Simulation 2: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. Tariffs already above 20% remain stable at their existing rates. India does not react.

Simulation 3: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. India responds by increasing its import tariffs on mining and manufacturing up to 20% against USA and China. Tariffs already above 20% remain at their existing rates.

Simulation 4: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. India responds by lowering its above 20% import tariffs on mining and manufacturing down to 20% against USA and China. Tariffs already below 20% remain at their existing rates.

Simulation 5: India, China, Japan, ASEAN- NIEs and ANZ eliminate bilateral tariffs on non-agricultural products – hypothetically mimics RCEP-like free trade bloc. USA and China have not yet gone to tariff war outlined in Simulation 1.

Simulation 6: India, China, Japan, ASEAN- NIEs and ANZ eliminate bilateral tariffs on non-agricultural products – hypothetically mimics RCEP-like free trade bloc. USA and China have gone to tariff war outlined in Simulation 1.

The following table provides changes in exports of model countries/regions for all the 6 simulations:

Annex II.4: Change in Exports (% change from base)

S. No.	Country/Region	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6
1	USA	-2.6882	-3.0620	-3.1432	-3.0613	0.5664	-2.0900
2	China	-3.1027	-3.2224	-3.4609	-3.2176	4.0964	1.0083
3	India	0.0181	-1.1528	-3.9223	-1.0472	11.5259	11.6904
4	ASEAN	0.1171	0.1307	0.1453	0.1310	2.1516	2.3001
5	NIEs	0.0440	0.0571	0.0803	0.0573	2.3992	2.4580
6	Japan	-0.8344	-0.9561	-0.9587	-0.9554	0.9262	0.1835
7	Australia and New Zealand	-0.2412	-0.3244	-0.3247	-0.3238	1.0356	0.7954
8	Bangladesh	-0.3294	-0.3361	-0.3201	-0.3357	0.8751	0.5159
9	Sri Lanka	-1.1068	-1.5607	-1.4100	-1.5539	1.1940	0.1347
10	Pakistan	0.0077	0.0879	0.1244	0.0918	0.0302	0.0167
11	Other South & South-East Asia	-0.2458	-0.3647	-0.3324	-0.3810	-0.3690	-0.6141
12	Canada	0.1931	0.2264	0.2139	0.2267	0.2713	0.4664
13	Mexico	-0.0134	-0.0274	-0.0393	-0.0274	0.2341	0.2243
14	Brazil	-1.0644	-1.1754	-1.2129	-1.1742	0.9197	-0.1551
15	America Other than N America	-0.0513	-0.0499	-0.0644	-0.0499	0.2496	0.1956
16	United Kingdom	-0.1457	-0.1209	-0.1120	-0.1206	0.0983	-0.0473
17	European Union -26	-0.2130	-0.2202	-0.2276	-0.2199	0.2046	-0.0090
18	Rest of Europe	-0.1402	-0.1733	-0.0545	-0.1725	-0.1196	-0.2656
19	Middle East and North Africa	0.0675	0.1084	0.1448	0.1084	-0.0533	0.0105
20	South Africa	0.0227	0.0181	0.0533	0.0185	-0.0194	-0.0073
21	Rest of Africa	0.0344	0.0553	0.0705	0.0529	-0.0439	-0.0128
22	Rest-of-World	-0.1178	-0.1213	-0.1226	-0.1214	0.1738	0.0519

Source: Authors' simulation based on the GTAP Model at NCAER

Simulation 1: USA and China increase tariffs against each other up to 20% on mining and manufacturing sectors. Tariffs already above 20% remain stable at their existing rates.

Simulation 2: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. Tariffs already above 20% remain stable at their existing rates. India does not react.

Simulation 3: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. India responds by increasing its import tariffs on mining and manufacturing up to 20% against USA and China. Tariffs already above 20% remain at their existing rates.

Simulation 4: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. India responds by lowering its above 20% import tariffs on mining and manufacturing down to 20% against USA and China. Tariffs already below 20% remain at their existing rates.

Simulation 5: India, China, Japan, ASEAN- NIEs and ANZ eliminate bilateral tariffs on non-agricultural products – hypothetically mimics RCEP-like free trade bloc. USA and China have not yet gone to tariff war outlined in Simulation 1.

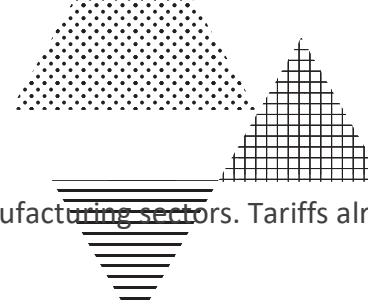
Simulation 6: India, China, Japan, ASEAN- NIEs and ANZ eliminate bilateral tariffs on non-agricultural products – hypothetically mimics RCEP-like free trade bloc. USA and China have gone to tariff war outlined in Simulation 1.

The following table provides change in imports of model countries/regions for all the 6 simulations:

Annex II.5: Change in Imports (% change from base)

S No.	Country/Region	Sim1	Sim2	Sim3	Sim4	Sim5	Sim6
1	USA	-4.2968	-4.4774	-4.6784	-4.4701	-1.1155	-5.3473
2	China	-6.5116	-6.7274	-7.3415	-6.7256	5.3063	-1.1438
3	India	0.6583	-2.7579	-4.5232	-2.6913	7.1462	7.9225
4	ASEAN	0.9537	1.0344	1.1549	1.0338	3.2233	4.2320
5	NIEs	0.6947	0.7671	0.8191	0.7670	4.4897	5.1738
6	Japan	1.0820	1.1732	1.2605	1.1722	6.1935	7.1612
7	Australia and New Zealand	0.6190	0.7552	0.8387	0.7527	5.8149	6.4688
8	Bangladesh	0.9914	1.4678	1.4639	1.4737	-1.2148	-0.2005
9	Sri Lanka	0.5706	1.0472	1.0832	1.0514	-0.8158	-0.0993
10	Pakistan	0.8292	1.0405	1.0710	1.0416	-1.3143	-0.4670
11	Other South & South-East Asia	0.5170	0.6634	0.7711	0.6568	-0.8645	-0.3625
12	Canada	1.4656	1.6222	1.6842	1.6206	-0.1553	1.3037
13	Mexico	2.6007	2.7026	2.7303	2.7018	0.0068	2.6445
14	Brazil	1.6114	1.7976	1.8610	1.7951	-1.1282	0.4574
15	America Other than N America	0.8964	1.0048	1.0500	1.0028	-0.4057	0.4831
16	United Kingdom	0.3416	0.4263	0.4799	0.4264	-0.3150	0.0193
17	European Union -26	0.2417	0.2928	0.3229	0.2927	-0.2568	-0.0197
18	Rest of Europe	0.0970	0.0780	0.2766	0.0783	-0.4738	-0.3918
19	Middle East and North Africa	0.3510	0.4674	0.5731	0.4686	-0.3120	0.0318
20	South Africa	0.5774	0.6917	0.8624	0.6917	-0.6929	-0.1368
21	Rest of Africa	0.3288	0.4141	0.4659	0.4122	-0.2694	0.0502
22	Rest-of-World	0.5274	0.5504	0.6553	0.5500	-0.5369	-0.0233

Source: Authors' simulation based on the GTAP Model at NCAER



Simulation 1: USA and China increase tariffs against each other up to 20% on mining and manufacturing sectors. Tariffs already above 20% remain stable at their existing rates.

Simulation 2: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. Tariffs already above 20% remain stable at their existing rates. India does not react.

Simulation 3: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. India responds by increasing its import tariffs on mining and manufacturing up to 20% against USA and China. Tariffs already above 20% remain at their existing rates.

Simulation 4: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. India responds by lowering its above 20% import tariffs on mining and manufacturing down to 20% against USA and China. Tariffs already below 20% remain at their existing rates.

Simulation 5: India, China, Japan, ASEAN- NIEs and ANZ eliminate bilateral tariffs on non-agricultural products – hypothetically mimics RCEP-like free trade bloc. USA and China have not yet gone to tariff war outlined in Simulation 1.

Simulation 6: India, China, Japan, ASEAN- NIEs and ANZ eliminate bilateral tariffs on non-agricultural products – hypothetically mimics RCEP-like free trade bloc. USA and China have gone to tariff war outlined in Simulation 1

Annex II.6: Key Macro Results for India (% change from base in real terms)

S. No.	Simulations	GDP Growth	Private Consumption	Investment	Relative to GDP	
					Consumption	Investment
1	Simulation 1	0.0855	0.1710	0.4261	0.0855	0.3406
2	Simulation 2	-0.4119	-0.8188	-1.0291	-0.4069	-0.6172
3	Simulation 3	-0.6881	-0.8496	-1.6205	-0.1615	-0.9324
4	Simulation 4	-0.3991	-0.8058	-1.0187	-0.4067	-0.6196
5	Simulation 5	0.8819	0.5601	0.7735	-0.3217	-0.1084
6	Simulation 6	0.9690	0.7280	1.2185	-0.2410	0.2495

Simulation 1: USA and China increase tariffs against each other up to 20% on mining and manufacturing sectors. Tariffs already above 20% remain stable at their existing rates.

Simulation 2: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. Tariffs already above 20% remain stable at their existing rates. India does not react.

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Simulation 4: USA and China raise tariffs against each other up to 20% on mining and manufacturing sectors, as well as against India. India responds by lowering its above 20% import tariffs on mining and manufacturing down to 20% against USA and China. Tariffs already below 20% remain at their existing rates.

Simulation 5: India, China, Japan, ASEAN- NIEs and ANZ eliminate bilateral tariffs on non-agricultural products – hypothetically mimics RCEP-like free trade bloc. USA and China have not yet gone to tariff war outlined in Simulation 1.

Simulation 6: India, China, Japan, ASEAN- NIEs and ANZ eliminate bilateral tariffs on non-agricultural products – hypothetically mimics RCEP-like free trade bloc. USA and China have gone to tariff war outlined in Simulation 1.

Annex II.7: Technical Note on the GTAP Model

The present work addresses issues of a rapidly changing and increasingly protectionist global trading regime affecting India's growth and international trade. The analysis is based on illustrative simulations using the Global Trade Analysis Project (GTAP) Model.

The GTAP model is a multi-region, multi-sector computable general equilibrium (CGE) model (Hertel et al. 1997). The model is well grounded in economic theory. The model assumes perfect competition in all markets, constant returns to scale in all production and trade activities, profit-maximizing behaviour by firms, and utility-maximizing behaviour by households.

In the GTAP model, each region has a single representative household, known as the regional household, comprising private households and government. The income of the regional household is generated through factor payments and tax revenues net of subsidies. The regional household allocates expenditure to private household expenditure, government expenditure, and saving according to a Cobb-Douglas per capita utility function. Each component of final demand maintains a constant share of total regional income.

The private household buys commodity bundles to maximize utility, subject to its expenditure constraint. The private household spends its income on consumption of both domestic and imported commodities and pays taxes.⁴² Taxes paid by the private household include commodity taxes for domestically produced and imported goods and income tax net of subsidies.

The government spends its income on domestic and imported commodities, and it collects taxes. Taxes consist of commodity taxes on domestically produced and imported commodities. Like the private household, government consumption is a constant elasticity of substitution (CES) composite of domestically produced and imported goods.

In the GTAP model, producers receive payments for selling goods and services both in the domestic market and to the rest of the world. Under the zero-profit assumption employed in the model, these revenues must be precisely exhausted by spending on domestic intermediate inputs, imported intermediate inputs, factor income, and taxes paid to the regional household.

The GTAP model postulates a nested production technology, with the assumption that every industry produces a single output, and constant returns to scale prevail in all markets. Industries have a Leontief production technology to produce their outputs. Industries maximize profits by choosing two broad categories of inputs, namely a composite of factors (value added) and a composite of intermediate inputs. The factor composite is a CES function of labour, capital, land, and natural resources. The intermediate composite is a Leontief function of material inputs, which are in turn a CES composite of domestically produced goods and imports. Imports come from all regions. Consumers are affected by resource allocation in the economy. A more efficient allocation of resources adds to consumer welfare and to gains in GDP.

⁴²The choice between domestic and imported goods by private households depends on their preference function. The GTAP model assumes the preference function to be constant elasticity of substitution (CES) aggregates of domestic and imported goods, where the imported goods are also CES aggregates of imports from different regions.

Annex II.8: Summary analysis of Indian tariffs, 2010-11 and 2014-15

	2010-11 effective tariff (MFN)			2014-15 effective tariff (MFN)			Bound Tariff
	No. of lines (%)	Average (%)	Range (%)	No. of lines (%)	Average (%)	Range (%)	
Total	11,328	12.0	0-150	11,481	13.0	0-150	0-300
HS 01-24	1,433	35.1	0-150	1,609	37.7	0-150	10-300
HS 25-97	9,895	8.6	0-70	9,872	9.0	0-100	0-150
<i>By WTO definition</i>							
Agricultural products	1,431	33.2	0-150	1,496	36.4	0-150	10-300
Animals and products thereof	106	30.8	5-100	124	30.4	5-100	35-150
Dairy products	32	34.4	30-60	33	34.2	30-60	40-150
Fruit, vegetables and plants	355	27.6	0-100	376	29.0	0-100	10-150
Coffee and tea	75	74.7	17.5-100	75	74.8	30-100	55-150
Cereals and preparations	137	30.4	0-90	142	40.9	0-150	35-150
Oils seeds, fats, oil and their products	196	18.5	0-100	208	33.2	0-100	15-300
Sugars and confectionary	38	33.4	10-60	41	35.4	10-60	45-150
Beverages, spirits and tobacco	123	78.7	7.5-150	126	77.5	5-150	35-150
Cotton	11	5.5	0-30	11	2.7	0-30	100-150
Other agricultural products, n.e.s.	358	25.1	0-70	360	25.2	0-70	25-150
Non-agricultural products	9,897	8.9	0-70	9,985	9.5	0-100	0-150
Fish and fishery products	176	29.5	5-30	287	29.6	0-30	35-150
Minerals and metals	1,912	7.1	0-10	1,920	7.4	0-15	0-40
Chemicals and photographic supplies	2,471	8.1	0-10	2,452	8.2	0-10	0-150
Wood, pulp, paper and furniture	495	9.2	0-10	500	9.2	0-10	25-40

Textiles	1,555	9.6	5-10	1,522	10.0	5-10	10-40
Clothing	397	10.0	10-10	396	10.0	10-10	35-110
Leather, rubber, footwear, travel goods	322	10.2	0-70 ^a	329	10.3	0-70 ^a	3-40
Non-electric machinery	1,094	7.1	0-10	1,094	7.0	0-10	0-40
Electric machinery	537	6.7	0-10	541	7.0	0-10	0-40
Transport equipment	244	21.5	0-60	244	32.1	0-100 ^c	3-40
Non-agricultural products, n.e.s.	676	8.6	0-10	681	8.8	0-10	0-40
Petroleum	18	8.2	0-10	19	4.6	0-10	n.a.
By sector							
Agriculture, forestry and fisheries	621	28.8	0-100	696	29.6	0-100	10-150
Mining	232	5.1	0-10	240	5.3	0-10	5-40
Manufacturing	10,474	11.1	0-150	10,544	12.1	0-150	0-300
Manufacturing excluding food processing	9,605	8.8	0-60	9,574	9.2	0-100	0-150
By stage of processing							
First stage of processing	1,261	22.5	0-100	1,372	23.5	0-100	5-150
Semi-processed products	4,339	8.6	0-60	4,337	9.0	0-60	0-150
Fully-processed products	5,728	12.2	0-150	5,772	13.6	0-150	0-300

n.a. Not applicable.

a Tariff lines with applied rates at 70% are unbound.

b Tariff lines with applied rates at 60% are unbound.

c Tariff lines with applied rates at 100% are unbound.

d ISIC Rev.2 classification. Electricity, gas and water is excluded (1 tariff line).

Note: Calculations exclude specific rates and include the ad valorem part of alternate rates.

Source: WTO calculations, based on data provided by the Indian authorities.

Annex III: Additional information on Tourism

Table III.1: JCI Accredited Organisations by Country

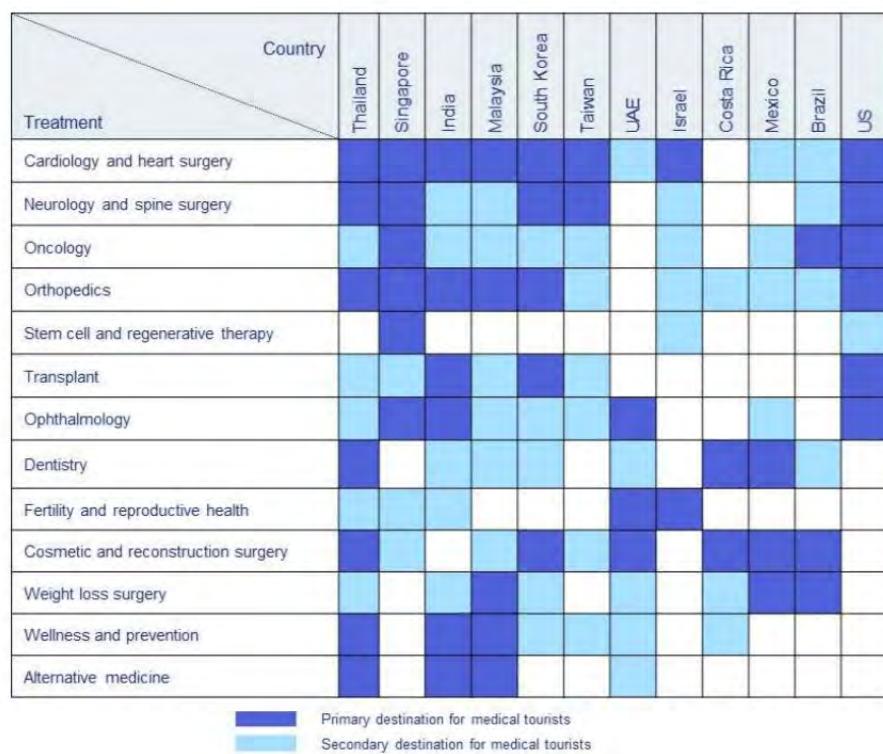
JCI Accredited Organisations by Country	
United Arab Emirates	195
Thailand	64
India	38
South Korea	26
Singapore	22
Malaysia	13
Mexico	7

Source: KPMG, Thailand; Board of Investment, Thailand

Table III.2: Government Measures undertaken by the Thai Government

Government Measures undertaken by the Thai Government	Details
Visa extension	<p>The Thai government extended the stay for medical tourists from China and the CLMV countries (Cambodia, Laos, Myanmar, and Viet Nam) from the previous 30 days to 90 days. The extended stay will also be applicable for up to four companions per patient;</p> <ul style="list-style-type: none"> • Citizens from Australia, Canada, Denmark, Germany, Finland, France, Italy, Japan, the Netherlands, Norway, Sweden, Switzerland, United Kingdom, and the United States can apply for the long-stay visa of up to 10 years. The permit would also be applicable for their spouses and children up to 20 years of age. • Permission will initially be extended for five years, and an additional five years can be added for those who meet the criteria and conditions. <p>In January 2018, the Thai government launched a 'Smart Visa' scheme which grants a four-year stay to investors and highly skilled professionals working in 10 specialized fields identified by the government as part of its technology push under the Thailand 4.0 plan</p> <p>The fields include: Affluent, Medical and Wellness Tourism, Medical Hub, Aviation and Logistics, Agriculture and Biotechnology, Biofuels and Biochemicals, Smart Electronics, Next-Generation Automotive, Smart Electronics, Food for the Future, Automation and Robotics, and Digital</p>
Smart Visa	<p>The Smart Visa scheme is targeted at entrepreneurs investing in new businesses; highly-skilled professionals; high-level executives; and start-up business owners</p> <p>The Smart Visa will provide the following benefits and privileges:</p> <ol style="list-style-type: none"> 1. Four-year visa 2. No work permit is required 3. Dependents (spouse and children) will also be entitled to the same privileges 4. Annual notification reporting instead of the usual 90-day reporting

Fig. III. 1: Popular MVT Treatments in India
Popular MVT treatments include mix of curative, wellness and alternate medicine⁵



Annex IV

Annex IV.1: Documents Required to Open Accounts in India

The table below summarizes the documents necessary to open accounts for different kinds of customers in India. The list is based on a survey of requirements from the most prominent banks in India. In some cases, the documents required from a KYC perspective are different from those required to simply open an account. Additional documents are required for non-resident Indians ('NRI'), persons of Indian Origin ('PIO') as per applicable FEMA and RBI guidelines. NRIs have the option of opening Non-Resident (External) Accounts ('NRE') or Non-Resident Ordinary Accounts ('NRO').

Type of Account	Illustrative list of documents required	Documents Required for KYC
Documents required for opening Savings Account:		
Savings Account Resident	<p>As soon as the individual applies to open a savings account in Bank, he/she will be required to submit the following documents:</p> <ul style="list-style-type: none"> • Proof of identity - Passport, Driving license, Voter's ID card, etc. • Proof of address - Passport, Driving license, Voter's ID card, etc. • PAN card • Form 16 (only if PAN card is not available) • 2 latest passport size photographs 	<ul style="list-style-type: none"> • Same as mentioned in illustrated list of documents
Documentation for Non-Resident Indian, while submitting the account opening form/documents at Bank Branches in India:		
NRO/NRE Account- NRI/PIO	<ul style="list-style-type: none"> • Photocopy of Indian Passport pages where your name, photograph, date and place of birth, specimen-signature, date of issue/expiry and address details are recorded; • Copy of valid Visa/Work/Residence Permit (the visa could be either in the passport or given separately); • Proof of Mailing Address (local or overseas address as selected for communication on the account opening form); and • Latest color photograph (passport sized). 	<ul style="list-style-type: none"> • Same as mentioned in illustrated list of documents

DEMAT - Indian Citizen and NRI/Foreign National	<p>Documents required for opening DEMAT Account for NRI/Foreign National and Indian Citizen:</p> <ul style="list-style-type: none"> • Duly filled in application form for opening DEMAT account • Passport size photographs • Proof of identity (Aadhar Card, Driving License, Voter ID, Passport) • Proof of address (Aadhar Card, Passport, Driving License, Voter ID) • Copy of PAN card 	<p>Additionally, the foreign national is required to furnish copies of the following documents for KYC requirements:</p> <ul style="list-style-type: none"> • Valid foreign passport. • Valid Indian visa (it should be a long-term visa: valid for more than 182 days) • Copy of Foreigners Registration Office (FRO) permits • Overseas address proof • Indian address proof • Passport-size photograph. • Copy of PAN card or Form 60. <p>They also need a letter from employer or letter of contract. For business visits, RBI approval may be needed.</p>
Company Account Indian	<p>List of self-attested documents and details to be submitted for One Person Company (OPC)/ Private/ Public Limited Companies:</p> <ul style="list-style-type: none"> • Certificate of incorporation. • Memorandum of Association (MoA) and Articles of Association (AoA). • Board Resolution (BR). • Updated list of directors. • Communication addresses proof of the entity. • Current landline/ mobile number and e-mail ID of the entity. • Permanent Account Number (PAN) of the entity. • Latest passport-size colour photograph of each of the authorized signatories. • A copy of one valid photo identification and address proof of each of the authorised signatories. • Shareholding pattern/ list of beneficial owners holding more than 25% in the company either directly or indirectly (on letterhead). • Permanent Account Number (PAN)/ identity proof of such beneficial owners as identified above. • Address proof of such beneficial owners as identified above. 	<p>KYC Documents Required for Opening a Bank Account for the following in a Bank Branch in India:</p> <p>Private Limited Company</p> <ul style="list-style-type: none"> • Entity proof and Address proof of the Entity • Memorandum of Association (MOA); • Articles of Association (AOA); • Certificate of Incorporation; • Board Resolution (BR) - duly signed; • PAN Card in the name of the company; • Any documents as mentioned above (except BR) containing address will be acceptable as address proof also. <p>Public Limited Company</p> <ul style="list-style-type: none"> • Entity proof and Address proof of the Entity; • Memorandum of Association (MOA); • Articles of Association (AOA); • Certificate of Incorporation; • Board Resolution (BR) - duly signed; • PAN Card in the name of the company

<ul style="list-style-type: none"> • Identity and address proof of the Senior Managing Official, in case the ultimate natural person is not identified as the beneficial owner. • Identity and address proof of Senior Managing Officials, in case the ultimate natural person is not identified as the beneficial owner. 	<ul style="list-style-type: none"> • Certificate of Commencement of Business • Any documents as mentioned above (except BR) containing address will be acceptable as address proof also.
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**KYC guidelines for
Liaison/Representative
office/Project office/Branch office
Accounts:**

- Certificate of Incorporation (COI) and Company incorporation documents, duly notarized by the Indian Embassy/notary public in the country of registration.
- Communication addresses proof of the entity. Note: Only Indian communication address proof is accepted.
- Current landline/mobile number and e-mail ID of the entity.
- Permanent Account Number (PAN) of the entity.
- Latest passport-size colour photograph of each of the authorized signatories.
- A copy of one valid photo identification and address proof of each of the authorized signatories. In case of foreign nationals, a copy of passport (self-attested) is required and the signature on the Customer Information Updation Form should be verified by either a foreign notary public/Consulate General or Indian Embassy in order to be accepted (the passport should be current and should bear the photograph and signature of the applicant).
- Shareholding pattern/list of beneficial owners holding more

Liaison
Office,
Branch
Office and
Project
Office

Documents required to open a Bank Account for Liaison Offices, Branch Office and Project Office

- Entity proof and Address proof of the Entity.
- Foreign Portfolio Investor (FPI) concerned should submit an undertaking that upon demand by Regulators/Law Enforcement Agencies as and when required the relative exempted document/s would be submitted to the Bank.
- Board resolution/resolution by the proper authority of the entity to invest in India; open the account and mode of operation.

than 25% in the company either directly or indirectly (on letterhead).

- PAN/identity proof of such beneficial owners as identified above.
- Address proof of beneficial owners as identified above.
- Permission to set up office as mentioned below.

Liaison/Representative Office:

- Copy of permission from the Reserve Bank of India (RBI) is required, OR
- Copy of Insurance Regulatory and Development Authority (IRDA) approval for foreign insurance companies.

For Branch office:

- Copy of RBI permission to open a Branch Office in India is required, OR
- For banking company, a copy of approval under provisions of The Banking Regulation Act is required, OR
- For branch/unit in a Special Economic Zone (SEZ), a copy of the certificate — which establishes whether the branch/unit is a part of an SEZ — to establish a branch/unit in SEZ is required.

For Project office:

- Duly acknowledged copy of report stating project details made to the RBI is required, OR
- Project/Contract award letter and RBI permission for project office and underlying document to confirm the category which is mentioned in the declaration that the project is actually among the categories allowed.

Annex IV.2: KYC Documents for Eligible FPIs Under the Simplified Procedure⁴³

		FPI Type		
Document Type		Category I	Category II	Category III
Entity Level	Constitutive Documents (Memorandum and Articles of Association, Certificate of Incorporation etc.)	Mandatory	Mandatory	Mandatory
	Proof of Address	Mandatory (Power of Attorney {PoA} mentioning the address is acceptable as address proof)	Mandatory (Power of Attorney mentioning the address is acceptable as address proof)	Mandatory other than Power of Attorney
	PAN	Mandatory	Mandatory	Mandatory
	Financial Data	Exempted *	Exempted *	Mandatory
	SEBI Registration Certificate	Mandatory	Mandatory	Mandatory
Senior Management (Whole Time Directors/ Partners/ Trustees/ etc.)	Board Resolution @@	Exempted *	Mandatory	Mandatory
	List	Mandatory	Mandatory	Mandatory
	Proof of Identity	Exempted *	Exempted *	Entity declares* on letter head full name, nationality, date of birth or submits photo identity proof
	Proof of Address	Exempted *	Exempted *	Declaration on Letter Head *
	Photographs	Exempted	Exempted	Exempted *
Authorized Signatories	List and Signatures	Mandatory – list of Global Custodian signatories can be given in case of PoA to Global Custodian	Mandatory – list of Global Custodian signatories can be given in case of PoA to Global Custodian	Mandatory
	Proof of Identity	Exempted *	Exempted *	Mandatory
	Proof of Address	Exempted *	Exempted *	Declaration on Letter Head *
	Photographs	Exempted	Exempted	Exempted *

⁴³Annex II of the KYC Rules have been reproduced here.

Ultimate Beneficial Owner (UBO)	List	Exempted *	Mandatory (can declare "no UBO over 25%")	Mandatory
	Proof of Identity	Exempted *	Exempted *	Mandatory
	Proof of Address	Exempted *	Exempted *	Declaration on Letter Head *
	Photographs	Exempted	Exempted	Exempted *

* Not required while opening the bank account. However, FPIs concerned may submit an undertaking that upon demand by Regulators/Law Enforcement Agencies the relative document/s would be submitted to the bank.

@@ FPIs from certain jurisdictions where the practice of passing Board Resolution for the purpose of opening bank accounts etc. is not in vogue, may submit 'Power of Attorney granted to Global Custodian/Local Custodian in lieu of Board Resolution'

Category	Eligible Foreign Investors
I.	Government and Government related foreign investors such as Foreign Central Banks, Governmental Agencies, Sovereign Wealth Funds, International/Multilateral Organizations/Agencies.
II.	<ul style="list-style-type: none"> a) Appropriately regulated broad based funds such as Mutual Funds, Investment Trusts, Insurance /Reinsurance Companies, Other Broad-Based Funds etc. b) Appropriately regulated entities such as Banks, Asset Management Companies, Investment Managers/ Advisors, Portfolio Managers etc. c) Broad based funds whose investment manager is appropriately regulated. d) University Funds and Pension Funds. e) University related Endowments already registered with SEBI as FII/Sub Account.
III.	All other eligible foreign investors investing in India under PIS route not eligible under Category I and II such as Endowments, Charitable Societies/Trust, Foundations, Corporate Bodies, Trusts, Individuals, Family Offices, etc.

Annexure V

Peer Group Analysis with Select Exim Banks [Export Credit Agencies (ECAs)]

Key Asian G20 Exim Banks like China and Korea also engage in a combination of Policy and Commercial Business. Korea uses the device of a separate balance sheet (the Economic Development Cooperation Fund) for concessional Policy Business, while in the case of China, like India, the same balance sheet of the Exim China is used. Again, Korea can utilize the separate balance sheet because all borrowings are done by KEXIM, which enjoys the Korean government solvency guarantee in its Act.

- The scale and impact of the Exim Bank of India clearly lag behind its peer institutions as may be observed from the following table on Loans and Advances as a Percentage of Total Exports:

Annex V.1: Loans and Advances as a Percentage of Total Exports

Year	Exim China	JBIC Japan	Exim Korea	Exim India	BNDES Brazil	EDC Canada
2013	10.9	14.0	8.6	3.5	6.4	7.5
2014	12.0	15.4	9.8	4.2	7.1	7.5
2015	13.9	19.1	10.8	5.6	7.4	9.4
2016	16.3	18.0	12.3	5.8	9.3	10.5
2017	N.A	18.1	11.1	7.5	6.3	9.7

Note:

- As may be observed from the above Table, the JBIC in Japan is the most significant, at a percentage number of over 18% of national exports for the past three calendar years, and around 15% for the two earlier years. Given JBIC's overseas developmental role, it may be more relevant to take the example of China, where the number hovers around 16%. Exim Bank of India occupies the lowest end of the spectrum with an average number of barely 5.2% of national exports, peaking at 7.5% in 2017. While the Brazilian number is lower than India in 2017, this appears to be an outlier as the position in the previous four years is materially in favour of Brazil.
- The GOI had set an ambitious target of USD 900 billion for India's exports by 2020. India's merchandise exports stood at USD 303 billion in FY 2018 (recording a growth of 9.9% over previous year). Even if the Bank merely maintains its average share of Indian exports at 5%, its loans and advances would need to touch USD 45 billion (5% of 900 billion), which is a quantum jump from its current levels.
- It is pertinent to note that the majority of national exports, in any country, occur in the normal course of business on cash or short credit terms (upto 90/180/270 days from shipment) and are addressed by the commercial banks. Further, such trade/export credit is generally a short-term revolving facility that is meant to finance either the pre-shipment and/or post-shipment leg of the export

transaction. There are however certain kinds of exports that commercial banks, tend to avoid, resulting in market failure; these are the natural playing field of Exim Banks.

2. A comparison of the loan assets of each Exim Bank is given below

Annex V.2: A comparison of the loan assets of each Exim Bank (USD Million)

Year	Exim China	JBIC Japan	Exim Korea	Exim India	BNDES Brazil	EDC Canada
2013	239,825.2	100,257.7	48,669.6	12,023.0	15,584.7	34,299.1
2014	280,923.8	106,080.5	56,087.8	13,207.9	16,068.7	35,850.0
2015	315,283.7	119,656.4	56,857.4	14,795.7	14,173.7	38,504.4
2016	342,352.4	115,811.3	61,016.9	14,969.2	17,204.9	41,231.4
2017	N.A	127,011.7	64,227.2	16,393.6	13,796.0	40,901.6

Note: As may be observed from the above Table that in absolute numbers as well, Exim Bank of India is dwarfed by the others. The Exim Bank of China is the giant, with its loans outstanding more than 20 times greater than that of Exim Bank of India, even though its actual exports are only 7 times those of India. Again, the relative marginalisation of the Exim Bank of India is clear. Once again, the variation for Brazil in 2017 appears to be a departure from the trend of the previous four years where its ratio is higher than India.

3. A third parameter for comparison of Exim Banks could be the capitalisation of each institution. Capitalisation has a bearing on the Capital to Risk-weighted Assets ratio (CRAR) of each institution, and thus its credit rating. It also has a bearing on the leverage or borrowing capacity of the institution. The following table illustrates the trends in Share Capital of Select Exim Banks:

Annex V.3: Trends in Share Capital of Select Exim Banks (USD Billion)

	2011	2012	2013	2014	2015	2016	2017
Exim India	0.5	0.6	0.6	0.8	1.0	1.1	1.1
EDC Canada	1.3	1.3	1.3	1.2	1.0	1.0	1.1
JBIC, Japan ⁴⁴	-	14.4	13.2	11.6	12.3	15.0	-
Exim Korea ⁴⁵	5.4	6.7	6.9	7.1	7.5	8.6	11.1
Exim China ⁴⁶	0.8	0.8	0.8	0.8	23.1	21.6	23.1

Note: As may be observed from the above table, the capitalisation of the Exim Bank is dwarfed by that of China (over 20 times), Japan (over 14 times), Korea (over 11 times) and even Brazil (over 12 times), with only Canada being lower. It may be noted in this context that Exim bank of China's capital increased from 5 billion RMB (USD 0.8 billion) in 2014 to 150 billion RMB (USD 23 billion) in 2015, so as to help it implement China's Belt and Road Initiative and platforms to boost international industrial capacity, following the Made in China 2025 Initiative.

⁴⁴JBIC was established on April 1, 2012 in accordance with the Japan Bank for International Cooperation Act. The Japanese Yen has depreciated against the dollar at an average rate of 13% during 2012-2015. In 2016, the Yen appreciated against the dollar by 6 %; resulting in the fluctuation in the dollar equivalent of share capital for JBIC. In 2017, the yen appreciated by 1.3% against the dollar.

⁴⁵According to the Exim Korea's Act (Article 37: Compensation for Amount of Loss), "the Export-Import Bank shall compensate for net loss of final accounts with the reserve each business year, and the Government shall compensate for the loss when the reserve is insufficient." The government provides funds to cover any net loss beyond the Bank's reserves (although Exim Korea has been consistently profitable since inception in 1976 till 2015 - they incurred first loss in 2016 to the tune of USD 1.21 billion). Exim Korea therefore enjoys de facto solvency guarantee from the Korean government which, in the opinion of rating agencies, would also ensure timely servicing of its debt obligations. This allows for a greater risk-taking ability in the national interest of promoting exports. Further, the Korean government made a capital injection of KRW 1.42 trillion in 2017, following which Exim Korea's paid-in capital increased to KRW 11.81 trillion by the end of the year compared to KRW 10.39 trillion in the previous year.

⁴⁶In 2015, Exim China formulated plans for business development and operation mechanisms in conformity with capital requirements and accelerated the setting up of a meticulous management mechanism to implement China's Belt and Road Initiative and platforms to boost international industrial capacity, following the Made in China 2025 Strategy.

4. The following table illustrates the Leverage Ratio of Select Exim Banks:

Annex V.4: Leverage Ratio of Select Exim Banks

	Net Worth	Total Borrowing	Leverage Ratio
Exim India 47	1,504	15,991	17.2
US Exim ⁴⁸	-206.9	24,670	(119.2)
EDC Canada	7,985	37,472	4.7
JBIC, Japan	22,509	139,008	6.2
Exim Korea	11,837	63,026	5.3
Exim China 49	45,244	416,839	9.2

5. Borrowings: The major sources of funds of the 6 ECAs are paid-up capital, reserves and borrowings. With the exception of US Exim, ECAs in the industrialized countries depend more on borrowings from the international capital markets as compared with those in developing nations. To some extent, this reflects their superior ability to borrow in international markets on favourable terms.

- Almost all of US Exim's borrowings are from the US Treasury (a small amount being marketable securities issued by US Exim).
- EDC Canada's debt instruments are sovereign obligations of the Government of Canada.
- JBIC's foreign notes and bonds are guaranteed by the Japanese Government.
- Exim Korea raises its resources from the international capital market through borrowing and bond issuances backed by its sophisticated and consistent track record of credit ratings. According to Article 20 (Export-Import Financial Debentures) of the Export-Import Bank of Korea Act, "The Export-Import Bank may issue export-import financial debentures as prescribed by Presidential Decree (Para 1); and the Government may guarantee the repayment of the principal and interest accrued therefrom for the export-import financial debentures (Para 2)".
- Exim China is the policy bank of China and its borrowings are completely guaranteed by the Government of China.

⁴⁷Exim India's net worth excludes intangibles.

⁴⁸US Exim's borrowings and Loans are supported by US Treasury. Financial accounts of US Exim are prepared under US Government GAAP, and as such it reports the excess of program revenue over costs, not a profit figure. Hence the figures are not comparable with those of other ECAs. As per the accounting practice of US Exim, Net Worth for US Exim is labelled as Net Position which includes paid-up 'Capital Stock', 'Unexpended Appropriations', and 'Cumulative Results of Operations'; the latter two entries taken together are comparable to reserves and surplus position of other ECAs.

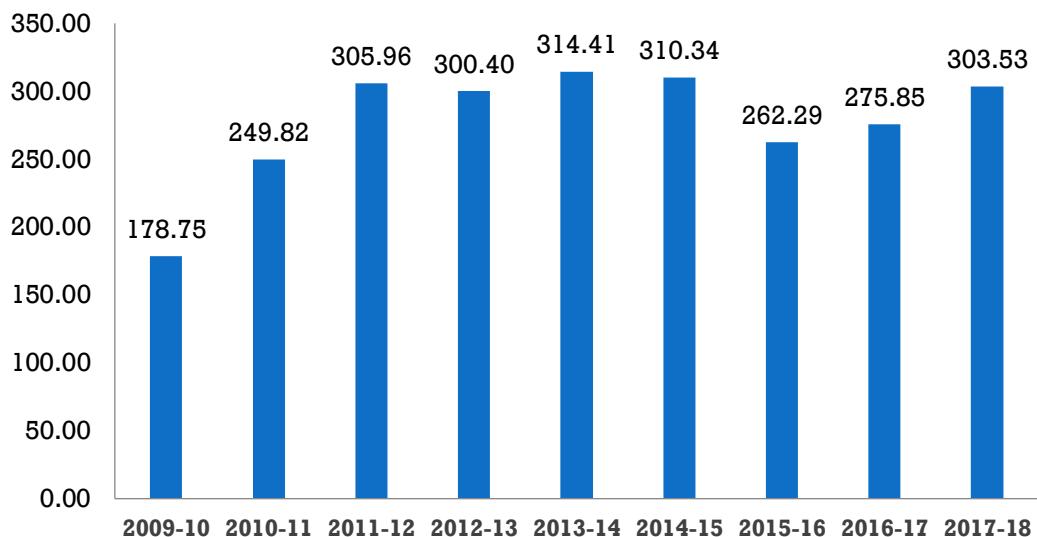
⁴⁹Exim China's Net Worth increased mainly on the back of its share capital, which was raised since 2015, in line with its new business development and operation mechanisms in conformity with capital requirements and accelerated the setting up of a meticulous management mechanism to implement China's Belt and Road Initiative and Made in China 2025 Strategy.

Exim India's access to funds from GOI/RBI is low and the Bank currently depends entirely on market borrowings, raising funds, *inter alia*, by way of private placements of rupee bonds/term loans from banks, at commercial rates. It also taps the international markets by way of a variety of instruments in different market segments, to reduce cost. As Exim India is fully owned by Ministry of Finance, GOI, it is treated as quasi-sovereign and its international rating is the same as the sovereign. However, domestic borrowing at commercial rates and incidence of withholding tax on overseas borrowings restrict its ability to offer internationally competitive credit packages whose terms are competitive vis-a-vis international banks and ECAs of other countries. It may be relevant to note that interest equalization support available under the Indian Development Economic Assistance Scheme (IDEAS) of Government of India is one tool that enables Exim India to offer competitive credit packages to Indian exporters through extension of Lines of Credit (LOC), to support project/ product exports from India.

Annex VI

Since the global economic crisis in 2008, India's merchandise exports have increased from USD 185.3 billion to USD 303.5 billion; however, this is below the level of aggregate exports of achieved in 2013-14. Graph II.1 depicts India's total exports in USD Billion for 2009-2018.

Figure VI.1: India's Total Exports 2009-2018 (in USD Billion)



Source: Department of Commerce, Ministry of Commerce and Industry, India

India's share in global merchandise exports remains at 1.68% in 2017, as per WTO. The following table shows that India's share in the total imports of the top 10 importing nations (with the exception of US) is below its overall share in world exports.

Table VI.1: Share of India's Merchandise Exports in Imports of Top 10 Importing Nations

Country	Rank in Global Imports 2017 (Intracen)	Rank in India's Exports 2017-18 (DoC)	Imports from World 2017 (Intracen), USD billion	Imports from India 2017-18 (DoC) USD billion	India's share %
USA	1	1	2409	47.9	2
China	2	4	1841	13.3	0.7
Germany	3	7	1174	8.7	0.7
Japan	4	18	672	4.7	0.7
UK	5	6	640	9.7	1.5
France	6	17	612	4.9	0.8
Hong Kong	7	3	590	14.7	2.5
Netherlands	8	11	574	6.3	1.1
South Korea	9	20	478	4.5	0.9
Italy	10	13	451	5.7	1.2

India has a very small share in the global export markets of the top traded products in the world. For three of the top four world import markets (at the 2-digit level), namely

electrical machinery and equipment, machinery and appliances and vehicles (excluding mineral oils), its exports as a share of total global imports stand at 0.32%, 0.7% and 1.1% respectively. However, in gems & jewellery, pharma, organic chemicals and iron & steel, it enjoys a respectable position. The following table provides the figures for World's Top Imports and India's Share in 2017 at the 2-digit level.

Table VI.2: World's Top Imports and India's Share, 2017

HS Code	Category	World Imports (in USD Billion)	Indian Exports (in USD Billion)	India's Share %
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television . . .	2,745.96	8.80	0.32
84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	2,134.19	16.65	0.78
27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral . . .	2,034.26	35.90	1.76
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	1,460.53	16.23	1.11
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad . . .	654.95	42.57	6.50
39	Plastics and articles thereof	610.61	5.93	0.97
90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical . . .	571.72	2.89	0.50
30	Pharmaceutical products	561.67	12.90	2.30
29	Organic chemicals	413.22	13.57	3.28
72	Iron and steel	383.75	11.70	3.05

Source: International Trade Center (accessed on 23 January 2019) and CII calculations; Exported value may not be the same

Annex VII

Annex VII.1: Uncertainty in global textiles and garments market and areas for further research

- **Role of technology in textiles manufacturing:** The textiles sector is growing increasingly dependent on technology to generate larger returns. This shift, however, means that **India's comparative advantage in cheap labour may become less potent** – companies may start searching for investment destinations that are renowned for cheap, high-functioning and fail-safe technologies (e.g. Taiwan, Korea, Japan) as opposed to labour. The impact of the automation trend on textiles growth – especially in India – is not yet clear; this will significantly impact India's ability to drive growth in the sector
- **Increased protectionism:** the developed world is one of the main consumers of India's textile exports; however, these same economies are also shifting more markedly towards a protectionist trade stance. **India's ability to drive growth in the textiles sector will depend heavily on the policy maneuvers that these developed countries will make** – unfortunately, there is currently little visibility into the trade policy decisions that will be made in the coming months and years; this is an area of heavy speculation.
- **Global variations in quality / quantity / emergence of new products:** China is focusing on improving its textiles production by moving to use of higher technology, produce higher quality or products with very large scale of production, and developing new types of textiles which are now part of the increasing market demand (such as technical textiles, geo-textiles), they have better product finish and are able to produce a larger quantity of products.

The following table shows Exports of Top 10 Exporters of Garments in the World. India's garments exports were estimated to be USD 18 billion in FY17. While Indian exporters have increased their global share compared to a decade ago, their exports have not performed well for several years now. In 2017-18, India's exports of garments fell 4% in USD terms, while those of Bangladesh and Viet Nam increased by 8% and 10% respectively. China is the largest exporter of garments in the world, though its exports have taken a hit recently: down from USD 187 billion in 2014 to USD 158 billion in 2017. However, for clothing, China's strategy appears to be to phase-out part of the clothing exports and increase its presence in the global market through FDI in other, low-cost countries.

Annex VII.2: Exports of Top 10 Exporters of Garments in the World, Billion USD

Ranking Based on 2017 Exports		2011	2012	2013	2014	2015	2016	2017
1	China (includes significant shipments through processing zones)	154	160	177	187	175	161	158
2	EU	116	109	118	127	112	117	130
2a	EU (excluding intra-EU exports)	28	29	31	32	28	28	31
3	Bangladesh	20	20	24	25	26	28	29
4	Viet Nam	13	14	17	20	22	25	27
5	India	14	14	17	18	18	18	18
6	Turkey	14	14	15	17	15	15	15
7	Hong Kong, China (includes re-exports)	25	23	22	21	18	16	14
8	Indonesia	8	8	8	8	7	7	8
9	Cambodia	4	4	5	6	6	6	7
10	USA	5	6	6	6	6	6	6
Total of Above (USD Billion – Taking exports of EU as a whole in total)		348	349	386	411	387	384	399
Share of Above 10 in World Total (%)		84.3	82.5	83.8	85	87	86.4	87.8
Malaysia (includes significant shipments through processing zones)		5	5	5	5			
Mexico (includes significant shipments through processing zones)		5	4	5	5			
Total of Above 15 (USD Billion – Taking exports of EU as a whole in total)		372	370	410	435			
Share of Above 15 in World Total (%)		90.1	87.5	89	90			

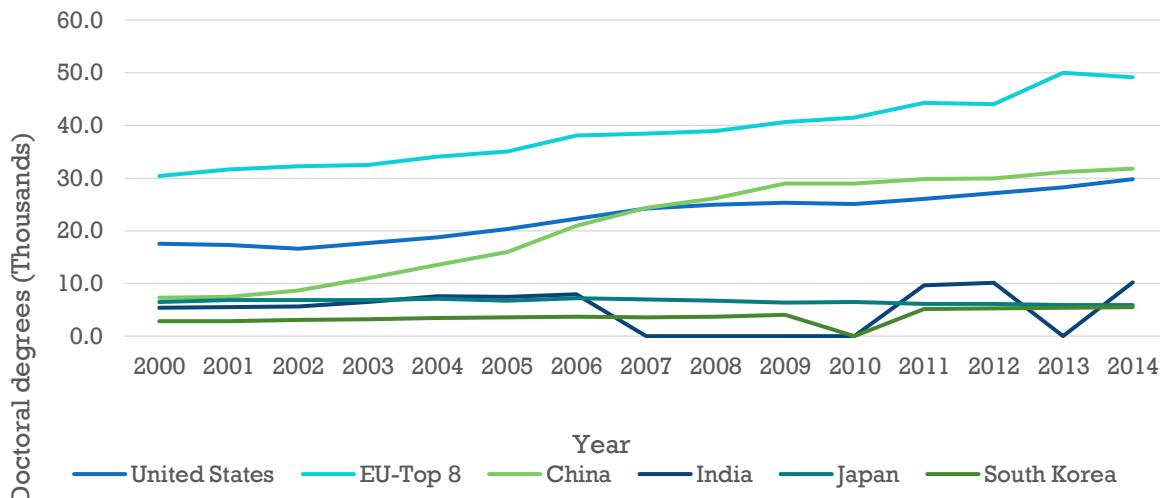
Source: WTO. Note: Till 2014, the data was on top 15 countries. Totals have been rounded up to nearest integer, with estimates for 2011 to 2014 based on the total for top 15 exporters

Annexure VII.3: STEM Graduates of India

Recommendation: The number of STEM Master's and PhDs (in disciplines like Chemistry, Biotech and Genetics) at premier institutes like IITs, IISERs and IISc needs to be increased to 3x

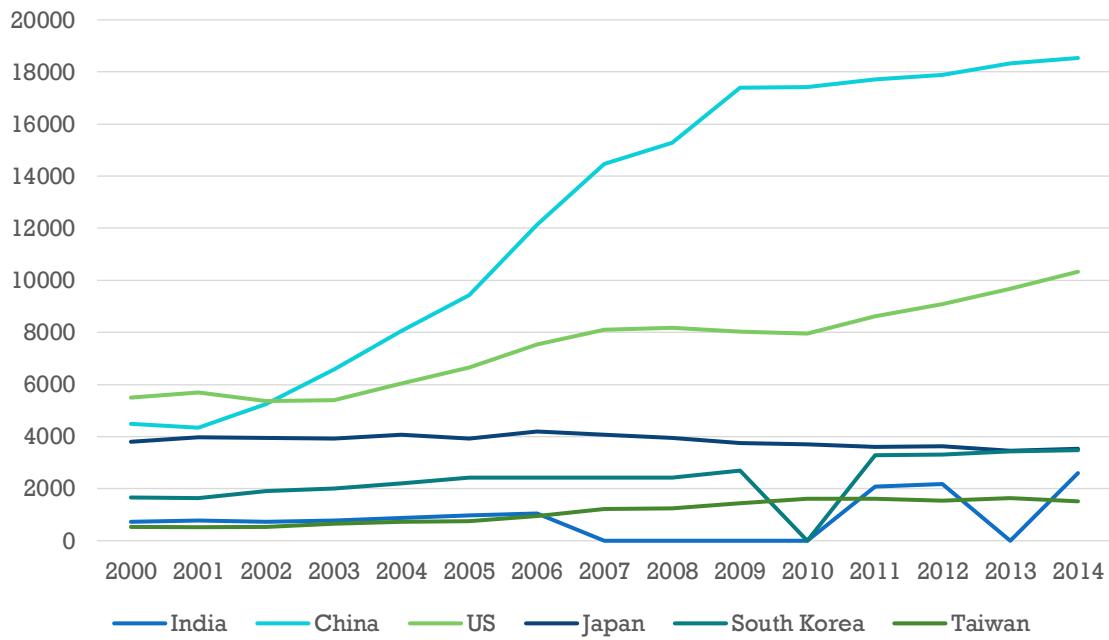
- I. In Key STEM disciplines, India lags behind other major economies in the number of Graduate and/or PhD students

Figure VII.3.1: STEM doctoral degrees, by selected country: 2000-14



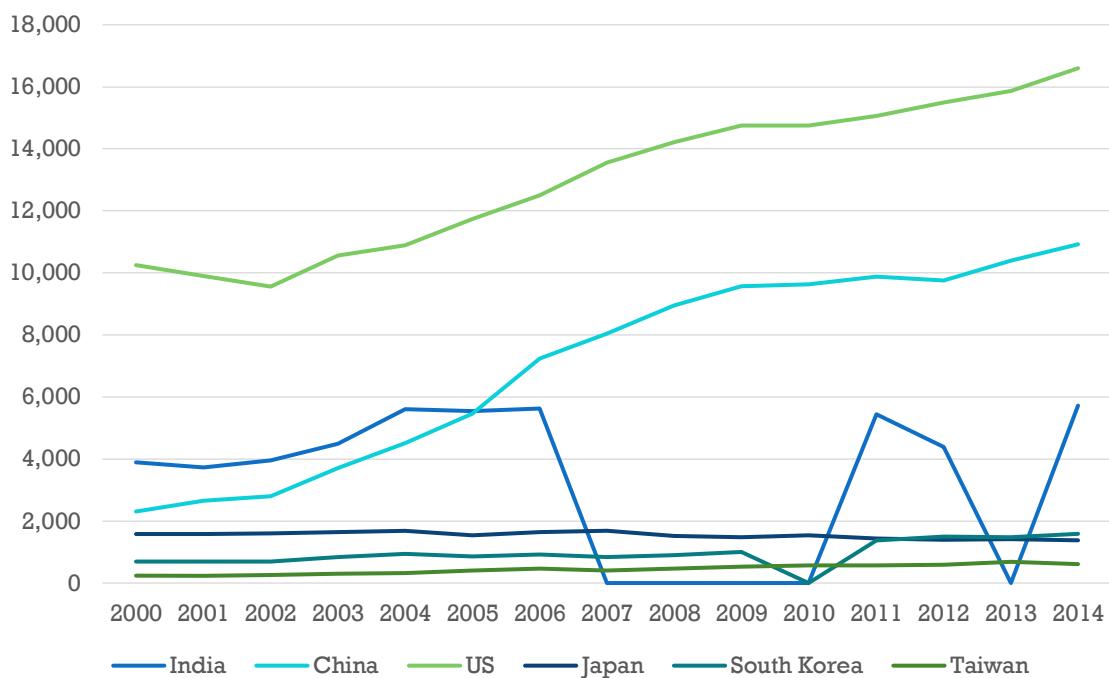
Note: Data for India not available for the years 2007, 2008, 2009, 2010 and 2013

Figure VII.3.2: Doctoral Degrees in Engineering: 2000-14



Note: Data for India not available for the years 2007, 2008, 2009, 2010 and 2013

Figure VII.3.3: Doctoral Degrees in Physical and Biological Sciences, Mathematics & Statistics: 2000-14

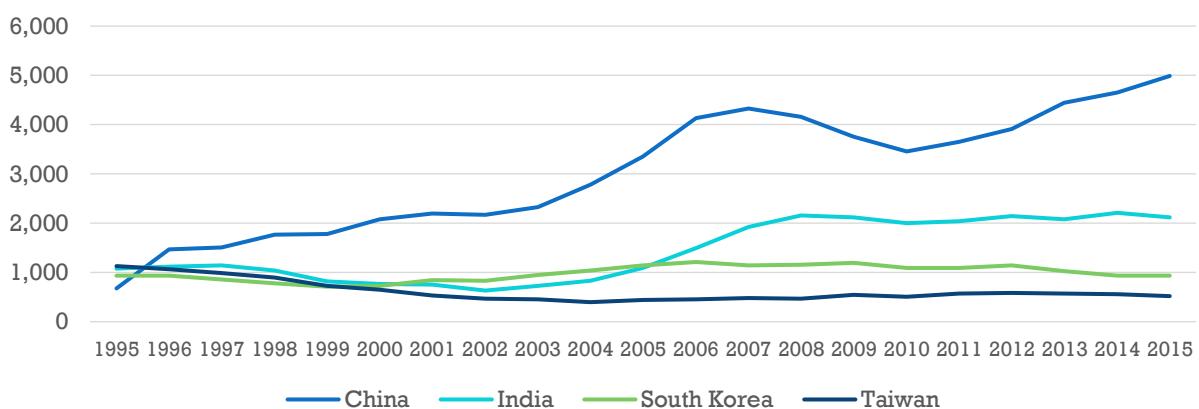


Note: Data for India not available for the years 2007, 2008, 2009, 2010 and 2013

II. Cream of Indian STEM undergraduate students go abroad to pursue higher education

Despite producing the highest number graduates in STEM disciplines in the world (a function of India's large population), the shortage of skilled talent in the STEM sector in India has increased from 6% in 2014 to 12% in January 2018. This is, in large part, because the cream of Science and Engineering students go abroad to pursue higher education (Master's and PhDs), and eventually find employment in those countries.

Figure: VII.3.4: US STEM Doctoral Degree Recipients by Foreign Nationality: 1995-2015



III. The number of students pursuing post-graduate education in Engineering outstrips those pursuing Biotechnology, Chemistry, Genetics, Mathematics and Statistics

Because the focus, thus far, has been on engineering and medical studies, fields like pure sciences and research have not gotten their due attention.

Figure VII.3.5: All India Postgraduate Enrolment by Discipline: 2013-18

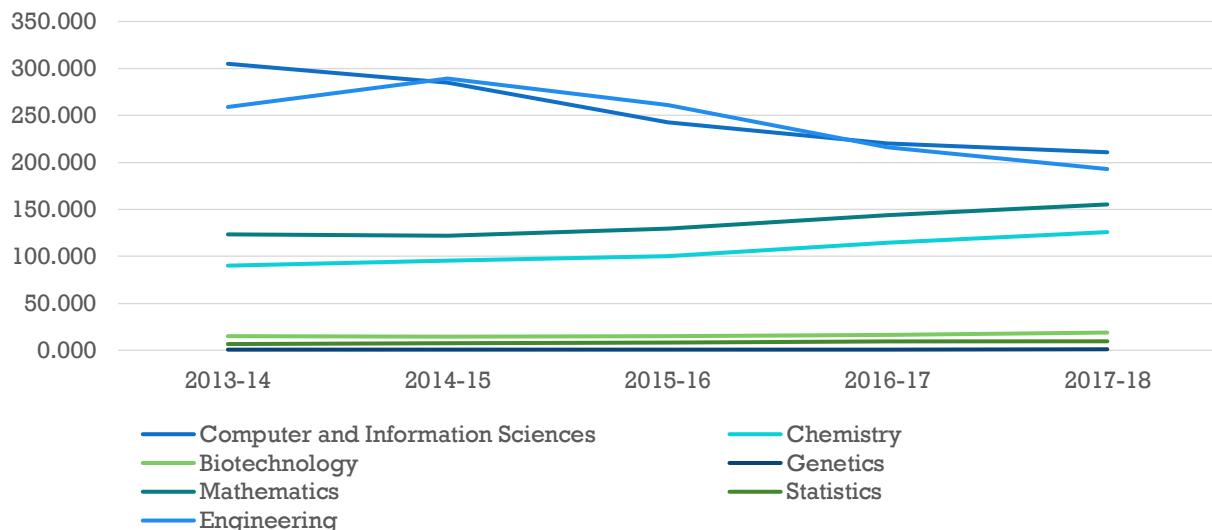
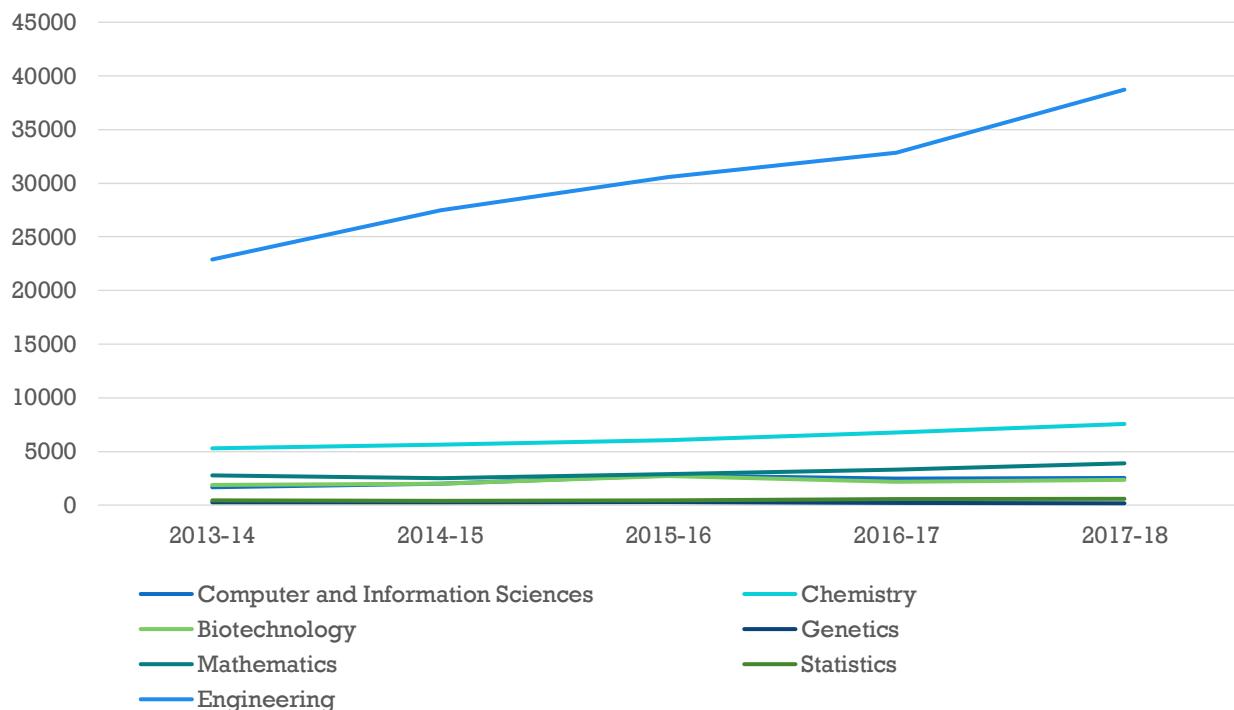


Figure VII.3.6: All India PhD enrolment by Discipline: 2013-18



IV. The number of students graduating in STEM disciplines from India's best institutes is minuscule in comparison to the aggregates

Supply: Students enrolled in MTech and PhD courses are fewer in comparison to BTech students

Table VII.3.1: Students enrolled in MTech and PhD courses

2017-18	IIT-D graduates	IIT-K graduates	IIT-Kgp graduates	BITS-Pilani graduates	Aggregate enrolment (overall)	Approximate graduates per year
BTech	694	505	1054	545	40,19,379	10,04,845
MTech	498	307	624	243	1,92,873	96,436
PhD	295	186	295	20	38,714	7,743

Demand: As India grows tomorrow's industries – biotech, AI, batteries – the demand for these graduates is going will grow substantially

India's best IT, biotech and AI firms are unable to hire as many experts in these fields as they'd want:

"I could hire 1,000 more post-graduates from premier institutions if they were available"

– CEO of Big 5 IT firm

"We desperately need more Master's and PhDs in Biotech"

– CEO of Biotech firm

"We will lose out to China if we don't increase graduates in math, science and AI"

– CEO of AI firm in India

V. Recommendations

1. Departments at India's Tier 1 universities that undertake research in line with industry's and government's research priorities may be funded through a **PPP model**. This will help address the salary constraints that crowd out professors who would've been otherwise keen to teach at these institutes
 - By means of a tech platform, GoI can help facilitate research linkages between life-sciences, IT companies etc and universities. This platform could be modelled along the lines of donor-NGO CSR platforms (like the one developed by Goodera, for instance)
2. Identify at least 10 research institutions/universities and assign them to regions where high-value-added industries are concentrated to ensure that various industry segments are connected to relevant institutions

3. Support extended to research through Corporate Social Responsibility (CSR) may be formalised under CSR rules
4. Awarding fellowships in pure sciences disciplines may help incentivise students to make the jump from undergraduate to specialised, postgraduate education
5. Launch a programme that incentivises the return of NRIs that have studied and worked abroad in key areas like biotechnology and artificial intelligence
6. Establish an “intellectual resource committee” in all universities offering PhDs (starting with STEM) comprising individuals including founders, experts in relevant industries, friends of the universities, etc. The purpose of this committee would be to provide specialised mentorship, counselling and ensure an increase in rigour within PhD ecosystems in the country
7. Increase R&D spending
 - GOI needs to spend at least 2-3% of GDP on Science and Research as against 0.69% at present to improve the quality of STEM postgraduates and facilitate research

Table VII.3.2: All India Postgraduate Enrolment by Discipline (2013-2018, actual numbers)

Discipline\Year	2013-14	2014-15	2015-16	2016-17	2017-18
Engineering	2,58,966	2,89,207	2,61,065	2,16,317	1,92,873
Computer and Information Sciences	3,04,880	2,84,545	2,42,908	2,19,981	2,10,740
Chemistry	90,101	95,295	99,888	1,14,328	1,25,805
Biotechnology	14,985	14,511	14,778	16,651	18,894
Genetics	704	788	838	944	1,092
Mathematics	1,23,543	1,21,911	1,29,604	1,43,762	1,55,239
Statistics	6,645	7,608	8,309	9,464	9,280

Source: AISHE reports

Table VII.3.3: All India PhD Enrolment by Discipline (2013-2018, actual numbers)

Discipline\Year	2013-14	2014-15	2015-16	2016-17	2017-18
Engineering	22,888	27,467	30,587	32,856	38,714
Computer and Information Sciences	1,663	1,979	2,768	2,458	2,515
Chemistry	5,293	5,649	6,045	6,786	7,562
Biotechnology	1,878	2,002	2,711	2,176	2,333
Genetics	259	265	285	180	170
Mathematics	2,759	2,508	2,870	3,335	3,894
Statistics	420	398	451	549	588

Source: AISHE reports

Annex VIII

Annex VIII.1

Details of tops 20 SEZs area lying vacant				
Sl. No.	Name of Developer	Location	Land Area in (Hectares)	
			Notified Area	Area lying vacant
1	Adani SEZ	Mundra, Gujarat	8481.28	4809.12
2	Kakinada SEZ Limited	Visakhapatnam, Andhra Pradesh	2049.327	1862.46
3	Sterling SEZ	Jambusar, Bharuch, Gujarat	1263.17	984.30
4	Andhra Pradesh Industrial Infrastructure Corporation Limited (APIIC)	Nellore, Andhra Pradesh	1032.27	857.10
5	AMRL International Tech City Ltd.	Nanguneri Taluk, Tirunelveli District, Tamil Nadu	1019.23	750.60
6	Khed Economic Infrastructure Private Limited	Village Kendur, Taluka Shirur and Villages Ningaon, Dawdi, Kanheresar Taluka Khed, District Punc, Maharashtra.	742.95	740.93
7	Maharashtra Airport Development Company Limited (MADC)	Nagpur (MIHAN), District Nagpur, Maharashtra	1597.16	737.14
8	Indiabulls Industrial Infrastructure Limited	Villages Musalgao and Gulvanch, Taluka Simnar, District Nasik, Maharashtra	1011.26	590.00
9	Tata Ltd. SEZ	Odisha	500.15	499.34
10	IFFCO Kisan SEZ	Nellore, Andhra Pradesh	768.27	382.27
11	FAB City SPV (India) Pvt. Ltd.	Villages Srinagar and Raviryal, Maheshwaran Mandal, Ranga Reddy District, Telangana	434.86	377.17
12	BeneficentKnolwedge Parks & properties Ltd	VillageParigil and Serikoloam Mandal, Anantapur Dist, Andhra Pradesh	366.409	366.41
13	L&T Shipbuilding Limited	Village Kattupelli, Ponneri Taluk, District Tiruvalur, Tamil Nadu	607.9	293.18
14	H.N. Co. SEZ	Nagaland	290	290.00
15	Indore Special Economic Zone	Indore, Madhya Pradesh	572.258	266.11
16	Jawaharlal Nehru Port Trust (JNPT)	Navi Mumbai, Maharashtra	277.38	246.38
17	Mas Fabric Park (India) Pvt. Ltd., Nellore	Nellore, Andhra Pradesh	235.07	221.65
18	Brundix India Apparel City Private Ltd.	Achutapuram, Visakhapatnam, Andhra Pradesh	404.7	219.70
19	Mahindra World City (Jaipur) Ltd. (Multiproduct SEZ)	Village- Kalwara, Jhai, Bhambhoriya, Bagru Khurd & Newta Tehsil- Sangana, District Jaipur, (Rajasthan)	604.5836	212.32
20	Sanghi SEZ Private Limited	Village Kobeda, Ranga Reddy District, Telangana	202.4	202.40

Annex VIII.2

Zone-wise Notified Land Area Details				(As on 07.02.2019)	
Name of Zone	States/UTs under jurisdiction	No. of Notified SEZs	Total Notified Area	Total Utilized Area	Land Area In (Hectares)
MEPZ SEZ	Tamil Nadu, Andaman and Nicobar Islands, Union Territory of Pondicherry excluding Mahe and Yanam	52	5037.98	2403.18	2634.80
Cochin SEZ	Kerala, Karnataka, Lakshadweep and Mahe	76	2997.24	1790.36	1206.88
Noida SEZ	Uttar Pradesh, Madhya Pradesh, Rajasthan, Delhi, Punjab, Haryana, Chandigarh, Uttarkhand, Himachal Pradesh and Jammu and Kashmir	58	2640.60	1251.56	1389.04
Kandla SEZ	Gujarat	27	14333.72	7763.83	6569.89
VSEZ	Andhra Pradesh, Chattisgarh, Yanam and Telangana	86	10506.45	4400.06	6106.39
SEEPZ SEZ	Maharashtra, Goa, Daman and Diu, Dadra and Nagar Haveli	52	6975.28	2177.17	4798.11
Falta SEZ	West Bengal, Orissa, Jharkhand, Nagaland, Tripura, Manipur, Meghalaya, Sikkim and Arunachal Pradesh	17	1614.61	683.85	930.76
Total		368	44105.88	20470.01	23635.87
