

EAC-PM Working Paper Series

EAC-PM/WP/05/2022

NON-TARIFF BARRIERS FACED BY INDIAN EXPORTERS FROM THEIR TOP PARTNER MEMBERS

Nisha Verma



EAC-PM
Economic Advisory Council
to the Prime Minister

Economic Advisory Council to the Prime Minister

November 2022

TABLE OF CONTENTS

I. INTRODUCTION.....	1
II. COUNTRY-WISE ANALYSIS.....	7
1. United States of America	7
1.1 India-USA Bilateral Trade	7
1.2 India-USA Trade Agreements	7
1.3 Non-Tariff Measures.....	7
1.4 Non-Tariff Barriers.....	9
2. United Arab Emirates.....	9
2.1 India-UAE Bilateral Trade	9
2.2 India-UAE Bilateral Trade Agreements	10
2.3 Non-Tariff Measures.....	10
2.4 Non-Tariff Barriers.....	11
3. China.....	12
3.1 India-China Bilateral Trade.....	12
3.2 Non-Tariff Measures.....	12
3.3 India-China Bilateral Agreements	13
3.4 Non-Tariff Barriers.....	13
4. Bangladesh.....	14
4.1 India-Bangladesh Bilateral Trade	14
4.2 India-Bangladesh Bilateral Agreements	14
4.3 Non-Tariff Measures.....	15
4.4 Non-Tariff Barriers.....	16
5. Singapore	16
5.1 India-Singapore Bilateral Trade.....	16
5.2 India-Singapore Bilateral Agreements.....	17
5.3 Non-Tariff Measures.....	17
5.4 Non-Tariff Barriers.....	18
6. United Kingdom.....	18
6.1 India-United Kingdom Bilateral Trade	18
6.2 India-United Kingdom Bilateral Agreements.....	18
6.3 Non-Tariff Measures.....	19
6.4 Non-Tariff Barriers.....	19

7. Saudi Arabia	20
7.1 India-Saudi Arabia Bilateral Trade	20
7.2 India-Saudi Arabia Bilateral Agreements	21
7.3 Non-Tariff Measures	21
8. Malaysia	22
8.1 India-Malaysia Bilateral Trade	22
8.2 India-Malaysia Bilateral Agreements	22
8.3 Non-Tariff Measures	22
8.4 Non-Tariff Barriers	23
9. Vietnam	23
9.1 India-Vietnam Bilateral Trade	23
9.2 India-Vietnam Bilateral Agreements	24
9.3 Non-tariff Measures	24
9.4 Non-Tariff Barriers	25
10. Japan	25
10.1 India-Japan Bilateral Trade	25
10.2 India-Japan Bilateral Agreements	25
10.3 Non-Tariff Measures	26
10.4 Non-Tariff Barriers	27
III. CONCLUSION	28
Annexure 1	31
UNCTAD NTMs Classifications	31
Annexure 2	33
Country-wise Detailed Tables on India’s Top HS 2-Digit-wise Exports and Imports	33
Annexure 3	38
Category-wise NTMs Classification on India’s Exporting Partners	38
References	41

NON-TARIFF BARRIERS FACED BY INDIAN EXPORTERS FROM THEIR TOP PARTNER MEMBERS

Nisha Verma¹

I. INTRODUCTION

Over the years, international tariff rates have declined substantially due to the acceptance of the General Agreement on Tariffs and Trade (GATT) and extensive indulgence in bilateral and regional preferential trade agreements by nations. Such agreements led to the liberalisation of tariff rates, hence, the significance of tariffs as a trade policy tool to curb trade flows or to protect from unfair trade practices has greatly declined with time. This decline has drawn significant attention to Non-Tariff Measures (NTMs) which act as an alternative for ensuring fair and secure trade and can gain market access. Since the last decade, the use of NTMs by both developed and developing nations has increased substantially and such measures have become an important issue in trade negotiations.

NTMs include a wide variety of detailed and complicated policies and laws than tariffs, that a country imposed or applied while trading goods. It includes various policy instruments, measures such as the prohibition or restrictions on exporting or importing goods, trade quotas, subsidies, and technical measures, specifying the type of standards, regulations, production processes, conformity assessment procedures, etc. Compliance with such regulatory norms has become a necessity for trading partners to gain reliable access to international markets. Therefore, in broad terms, NTMs can be defined as 'measures other than tariffs, imposed by trading countries that could have a significant impact on the flow of international trade in goods and can be used as a medium to restrict trade flows'. (UNCTAD, 2019)

UNCTAD has categorized the NTMs into 3 broad categories according to their scope, design, and usage. First is technical measures which include Sanitary and Phytosanitary Measures, Technical Barriers to Trade, and Pre-shipment Inspections. Second is non-technical measures such as non-automatic import licensing, price control measures, restrictions, etc. The third is export-related measures. Each of these broad categories includes different forms of NTMs and regulations. There are a total of 16 categories of NTMs named under Chapter A to Chapter P. Then each chapter is further segregated into several sub-groups to make it clearer of the regulations which affect trade. The chapters of the NTMs

¹ Young Professional, Economic Advisory Council to the Prime Minister

classification are illustrated in Annexure 1 below. Some of the important and widely used Chapters are Chapter A: Sanitary and Phytosanitary Measures (SPS), Chapter B: Technical Barriers to Trade (TBT), Chapter C: Pre-shipment Inspection, and Chapter P: Export-related measures.

It is believed that these NTMs have significant distortions in trade flows due to prohibitions or restrictions policies used by member countries. However, with time, the introduction of technical measures such as SPS and TBT has in fact enhanced the overall trade. These measures are comprised of a wide array of regulations that vary considerably by type, designs, use of products. The usage of such technical measures has increased with time. According to the WTO (I-TIP) data source, as of 2021, out of the total in-force non-tariff measures, around 30 percent were covered under the SPS category and 29 percent were under the TBT category². The broad objectives of using such measures are to protect the health of humans, animals, and plants and to maintain the quality of products while considering environmental health.

Additionally, to maintain the parity and sovereign right of each trading member, the SPS and TBT Agreements were signed by the WTO members. It ensures that there will be no misuse of measures for protectionist purposes or will result in any unnecessary barriers to trade that could affect the flow of goods in foreign markets.

Sanitary and Phytosanitary Measures

Sanitary and Phytosanitary (SPS) measures include those regulations and restrictions that ensure the quality of products and protect human, plant, and animal health. These measures are largely used for agriculture or animal-origin products which are directly used for human consumption. In response to consumers' concerns about food quality and safety and the risks associated with food, these measures have predominantly evolved globally.

The WTO SPS Agreement was entered into force on 1st January 1995 and mainly concerns with the safety of food and the health of humans, plants, and animals. Some of the provisions included in the SPS WTO Agreement are Harmonization, Equivalence, Transparency, Risk Assessment, Inspection, Approval requirements, etc. The broad view of such provisions is that all the members shall form, recognise, and apply common SPS measures to the extent possible. Also, shall consider each member's regulations as equivalent if they are meeting the stated objectives, even though they are not the same as their own,

² <http://i-tip.wto.org/goods/default.aspx?language=en>

with no arbitrary or unjustifiably discrimination among them. It allows every member to set their own standards and regulations but should be with scientific reasons³.

Some of the type of SPS regulations that are commonly used by partner members are as follows⁴:

Prohibition or restrictions on imports

This type of regulation is used by a country when imported products can pose Sanitary or Phytosanitary risks or can be poisonous for consumers to consume. Such restrictions can be based on geographical location, MRLs, authorization, production processes, etc.

Hygienic requirements

These requirements are related to hygienic practices and microbiological criteria used by exporters for ensuring the safety of products. Such requirements can mention the establishments and tools used during the manufacturing and processing stage. Further, these conditions can also extend to non-food products if any sanitary and phytosanitary risks are at stake.

Treatment for elimination of plant and animal pests and diseases

Countries mentioned various treatments to eliminate plants and animal pests or disease-causing organisms in the final product. These can be applied during or after the production process as required. Also, sometimes countries ban certain treatments for sanitary and phytosanitary reasons. Some of the treatments are cold or heat treatment, Irradiation, Fumigation, etc.

Conformity Assessment related to Sanitary and Phytosanitary Measures

Such measures involve the requirements for the verification of products that ensure that a particular product is compliant with the given SPS conditions. This can be in the form of inspection and approval procedures, testing, traceability, etc.

Technical Barrier to Trade

On the other hand, Technical Barriers to Trade (TBT) are more comprehensive and technical in nature. The scope of TBT measures is wider than

³ https://www.wto.org/english/tratop_e/sps_e/spsagr_e.htm

⁴ UNCTAD Trains

SPS as these are applied to a broader set of sectors and are more complex to comply with such requirements. These regulations include the different characteristics of products, standards, methods of the production process, technical regulations, etc. Some of the provisions which are comprised in the WTO TBT Agreement and are important to be followed by member partners for a transparent trade are Preparation, Adoption, and Application of Technical Regulations and Standards, Conformity Assessments, Conformation and Recognition of assessments, transparency, etc. These provisions broadly state that the framing of such technical regulations or standards by the member partners shall not lead to any unnecessary obstacles to its partner countries. These should only be applied with a focus on meeting the objectives without any personal interest.

Further, the Conformity Assessment Procedures that determine that relevant requirements in technical regulations or standards are fulfilled, have to be transparent and shall not be stricter or be applied more strictly than is necessary. These confirmations can be achieved through testing, approvals, or a combination of more than one method. The other ways to ensure that a product is compliant with the requirements can be through certifications and traceability, which is used to track a product through different stages of the production process. TBT Regulations are more confined to the framing of marking, labelling, or packaging requirements, requirements for transport, storage, product identity, safety, security, etc⁵.

Non-Tariff Measures vs Non-Tariff Barriers

There was a perception among trading members that NTMs are solely applied by the partner countries for restricting trade and protecting domestic producers from foreign competition. Thus, Non-Tariff Measures are often recognised as a 'Non-Tariff Barrier' to international trade. However, this is not the case for every NTM. It can be true before decades, as most of the measures were restrictive in nature in the form of quotas, export or import restrictions, and imposition of duties. Whereas, as time progress, with changes in lifestyle and a rise in awareness of safety and health among consumers, most of the measures have taken many different forms and do not serve as a barrier. Compliance with such requirements could rather lead to an increase in trade among partners. For example, regulations of SPS or TBT like packaging, labelling, marking, etc, improve the quality of products and make them more competitive in the market. Therefore, it is important to note that every NTM cannot act as an NTB.

⁵ https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm

There exists a thin line between NTM and NTB and thereby members should study carefully before considering a measure as a barrier. One way to find out whether an NTM is an NTB or not can be done through WTO Principles. According to the WTO trading principles, while imposing an NTM, countries shall not discriminate among their trading partners on any basis and such measures shall not create any unnecessary obstacles to the flow of trade. However, sometimes partner countries deliberately use such practices by imposing strict or discriminatory technical measures, and regulations to restrict their trade flow for protecting their domestic producers. Such unethical or discriminatory measures used by trading partners can be used as a medium of restricting trade for personal interest by the member partners and could be consider as a Barrier if no proper reason exist to it.

India's trade position

For the period 2017-21, India's total average merchandise exports to the world were recorded at USD 332.14 billion and imports were USD 492.37 with a trade deficit of USD 160.23 billion. The top exporting partners of India were the USA with 16 percent of the total export share followed by UAE, China, Hong Kong, Bangladesh, Singapore, the UK, Germany, Netherlands, Nepal, etc depicted in Annexure 1.

The top product categories at HS-2 digit which cover India's almost 50 percent of exports were HS-27 Mineral fuels, HS-71 Gems, and Jewellery, HS-84 Nuclear reactors and boilers, HS-29 Organic chemicals, HS-87 Automobile parts, and HS-30 pharmaceuticals products for the period taken into consideration. For a growing economy like India, international trade is one of the fundamental drivers for the economy. It is making continuous efforts to capture the foreign markets and to bring out the full potential of its products, by entering into various bilateral and multilateral trade agreements. Such agreements help India to liberalise both tariffs and Non-tariff Measures. Thereby, provide a window to eliminate obstacles and barriers Indian exporters faced. However, there still exists some hidden non-tariff barriers that Indian exporters faced in their top export markets resulting in distorting their trade flows.

This working paper provides a detailed analysis of NTMs and NTBs imposed by India's top 10 exporting markets for trade in goods. The countries have been selected from the top 15 export destinations and FTA partners according to the availability of data. For each country, **Section 1** discussed the overview of the bilateral trade between India and its partner country. The data for the same has been extracted from the Ministry of Commerce and Industry

for the period 2017-21. **Section 2** mentioned the existing or ongoing bilateral trade agreements.

Section 3 provides detailed information on NTMs imposed by India's trading partner. It highlights the type of NTMs used by the member country. Furthermore, a detailed analysis of SPS and TBT regulations is also executed to understand which type of technical regulations a partner country imposed on India, more often. The data for NTMs is extracted from UNCTAD Trains from the year 2010 till the latest year of available data. This section also mentions the Coverage and Frequency Ratio of NTMs⁶. The Coverage ratio measures the value of imports covered with NTMs as a percentage of total imports in each sector. While the Frequency ratio indicates the percentage of traded products to which one or more NTMs are applied for each sector⁷. The rationale for using these two indices in this paper is to understand the degree of effectiveness of NTMs in India's top export sectors. It is to be noted that these ratios are not calculated bilaterally, rather it shows the overall picture of the imposition of NTMs in each sector. The data for the ratios is taken from World Integrated Trade Solutions (WITS).

Section 4 listed out the current issues which Indian exporters faced while exporting their products to their foreign markets for understanding the issues in a detailed manner. There are various issues of industry members which are more related to compliance, operations, costs, procedural, and regulation-related issues related to NTMs and can act as a barrier in the future. Therefore, most of such issues/barriers have been highlighted. This will give the area of concern to our policymakers or stakeholders to address, for any further discussions or negotiations with our subsequent trading partner country. These barriers are consolidated after consulting with different Export Promotion Councils (EPCs)⁸ and from various export-related studies by different organizations such as USTR, Trade Policy Report, etc.

⁶ The ratio analysis is not done for all the countries due to the unavailability of data.

⁷ <https://wits.worldbank.org/tariff/non-tariff-measures/en/type-count/country/AFG/ntmcode/A>

⁸ The export promotion councils which are consulted and shared their valuable inputs are the Federation of Indian Export Organisations (FIEO), CHEMEXCIL, APEDA, Confederation of Indian Industry (CII), and Gems and Jewellery Export Promotion Council of India, etc.

II. COUNTRY-WISE ANALYSIS

1. United States of America

1.1 India-USA Bilateral Trade

For the period 2017-21, India's average merchandise exports to its top trading partner (USA) are valued at USD 56.23 billion, while India's average imports from the USA were valued at USD 34.04 billion leading to a surplus of USD 22.19 billion. The top 5 export products at HS 2-digit which has a share of around 40 percent in the total exports were HS-71 Gems and Jewellery (19 percent share of total exports), HS-30 Pharmaceutical products, HS-84 Nuclear reactors, HS-27 Mineral fuels, HS-63 Textiles articles, etc. Whereas, India's 50 percent of imports were covered by HS-27 Mineral Fuels, HS-71 Gems and Jewellery, and HS-84 Nuclear reactors. (Details are in Annexure 2).

1.2 India-USA Trade Agreements

India and USA are a part of the G-20, Association of Southeast Asian Nations (ASEAN) Regional Forum. Also, India become a part of the UN Security Council in 2021 for a two-year term and an observer to the Organization of American States. However, India has not signed any bilateral trade agreement with the USA till now. It is envisioned experts that a Free Trade Agreement between India and US will give benefits to both nations. The new President of the influential US India Business Council (USIBC) stated that an FTA between India and US is an important pact for the protection of the people and businesses⁹.

1.3 Non-Tariff Measures

The period taken for USA's NTM analysis is from 2010 to 2019. For the given period, the USA has notified around 942 notifications related to the NTMs. The type of NTMs used by the USA while notifying the notifications were SPS, TBT, and trade protective measures followed by others. A piece of category-wise full information is attached in Annexure 3. Out of the total notifications, SPS and TBT cover almost 80 percent of the share, where SPS measures have 373 notifications and TBT measures have 387 notifications with the objective to protect the health of people, plants, and animals and to ensure the quality and safety of products.

⁹ https://www.business-standard.com/article/economy-policy/india-and-us-need-a-free-trade-agreement-says-usibc-president-122012600024_1.html

In the SPS category, the usage of Authorization Regulations which include the requirements for approval, permits, and license of a consignment before importation, is commonly used in the USA’s SPS notifications. Around 31 percent of the total SPS notifications were of authorization requirements followed by the prohibition of products that possessed sanitary and phytosanitary risks, Conformity Assessment requirements such as testing, inspection, and others. While, under the TBT measure category, notifications notifying the requirements for testing of products for compliance with the pre-defined specifications have the highest share among others. Around 26 percent of the total TBT notifications defined the testing requirements followed by the conditions for product quality, safety, labelling, etc as shown in figures 1 and 2 below.

Figure 1: Requirements and conditions mentioned in the USA’s SPS Measures

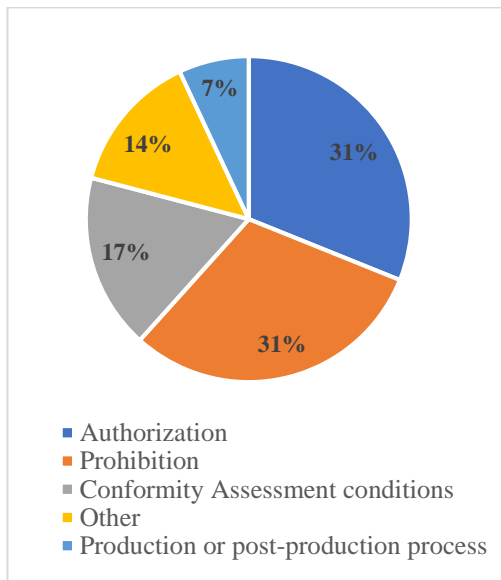
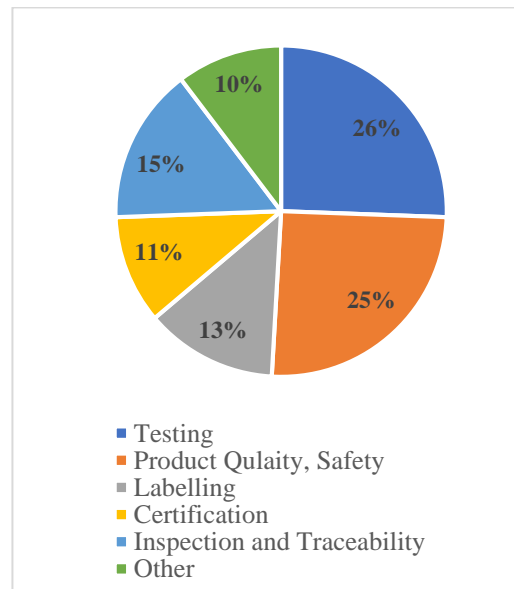


Figure 2: Requirements and conditions mentioned in the USA’s TBT Measures



Source: UNCTAD Trains

To examine the presence of NTMs in India’s top exported sectors to the USA, the two indices: The Frequency Index and the Coverage Index are used. These two indices will help to understand how much India’s exports are affected by NTMs. The highest TBT coverage ratio of the USA was 99 percent on fuels and the frequency ratio for the same sector stood at 59 percent. For the Gems and Jewellery sector, the TBT coverage ratio was 80.2 percent while the frequency ratio was 39.90 percent. This shows that India’s top exports to the USA were covered by NTM regulations and requirements which increases the burden of exporters to meet those requirements for a smooth flow of trade.

1.4 Non-Tariff Barriers

Some of the barriers which Indian exporters faced in the USA are as follows:

(i) High certification and labelling cost

The authorization requirements of the USA are very complex and time-consuming that include a large number of agreements and protocols. Fulfilling such requirements create the unnecessary burden of high costs and delay in the exports of consignments. India's exports of food products are further affected in complying with issues related to pesticides in the production and trade of agricultural products and with the unreasonable and strict labelling and packaging requirements. To reduce the cost of compliance, the USA can ease the process of its authorization with no delays in the approval of consignments and if any delay or rejection occurs from the US side, a proper reason should be provided by them. Often, the reasons for rejection by the USA are not justified which acts as a major concern to the exporters. (EXIM Bank, 2019)

(ii) Prohibition of coloured gemstones

Indian Gemstones Cutting & Polishing Industry has been figuring in the list of products under US Trafficking Victims Protection Re-Authorization Act (TVPRA) since the 1990s. It states that India's Gemstones industry involves child labour. However, the landscape of India's gemstone industry has changed substantially in a way that there are no child labour instances in the industry. Many of the craftsmen have now become exporters. Craftsmen have been educated and have realized the importance of compliance and so are not involving their children in the industry. Therefore, it can be requested to the USA for excluding this industry from its Act by providing them the proofs and inspection tests.

2. United Arab Emirates

2.1 India-UAE Bilateral Trade

India's average bilateral merchandise exports to UAE, for the time period 2017-2021 stood at USD 26.37 billion whereas imports were valued at USD 30.65 billion leading to a trade deficit of USD 4.28 billion. The top export product categories at HS 2-digit which cover almost 60 percent of total exports were HS-71 Gems and Jewellery (alone covering 29 percent of exports), HS-27 Mineral fuels, HS-85 Electric machinery and equipment, HS-61 Apparel and Clothing, and HS-89 Ships and Boats. Whereas, India's top imports from UAE belong to the

product groups of HS-27 Fuels, HS-71 Gems, and Jewellery, 39- Plastic articles, HS-72 Iron, and Steel products (details in Annexure 2).

2.2 India-UAE Bilateral Trade Agreements

India signed a Comprehensive Economic Partnership Agreement (CEPA) with UAE on 18th February 2022 and officially entered into force on 1st May 2022. The agreement includes provisions related to trade in goods and services and for the first time, India included the provision for Digital Trade, Micro, small and medium-sized enterprises (SMEs), and Economic Cooperation. Through this agreement, India will get an advantage on market access in over 97 percent of its tariff lines which account for 99 percent of Indian exports to the UAE¹⁰.

The India-UAE agreement envisaged a boost in trade volume from USD 60 billion to USD 100 billion. However, India still lacks a diversified export basket with UAE. Currently, India's export basket consists of gems and Jewellery, minerals, and electrical appliances, however, India should focus on capturing market access for other products as well where it has a comparative advantage.

2.3 Non-Tariff Measures

For the period 2010-20, UAE has notified 781 notifications related to the imposition of Non-tariff measures. These notifications include measures which covered under SPS, TBT, export-related measures, non-automatic import licensing, price control measures, etc. Among the above-mentioned measure categories, SPS and TBT measures were dominant over the other measures. About 80 percent of notifications described the regulations or requirements related to the SPS and TBT (details in Annexure 3).

Focusing more on SPS and TBT notifications, Conformity assessment requirements such as testing, certification, and inspections were imposed by UAE followed by traceability requirements, production processes, etc. Around 27 percent of the total SPS notifications were on these requirements and 22 percent on traceability and registration requirements. TBT notifications focused more on conditions on testing and certifications (around 118 notifications) for compliance with a given specification, followed by product safety and quality requirements, labelling, marking, and packaging requirements, etc as shown in the figures 3 and 4 below.

¹⁰

<https://pib.gov.in/PressReleasePage.aspx?PRID=1821785#:~:text=Overall%2C%20India%20will%20benefit%20from,sports%20goods%2C%20plastics%2C%20furniture%2C>

Figure 3: Requirements and conditions mentioned in the UAE's SPS Measures

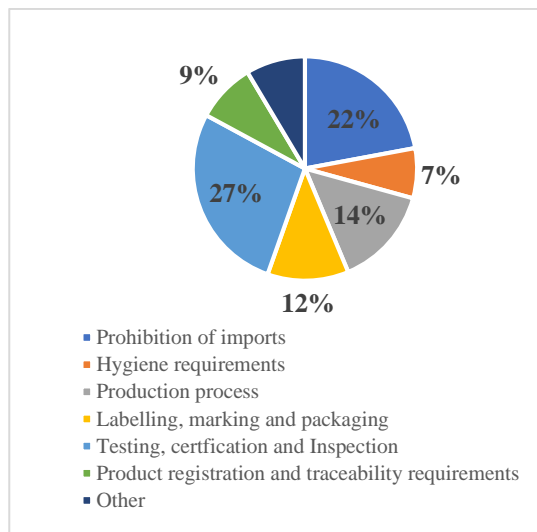
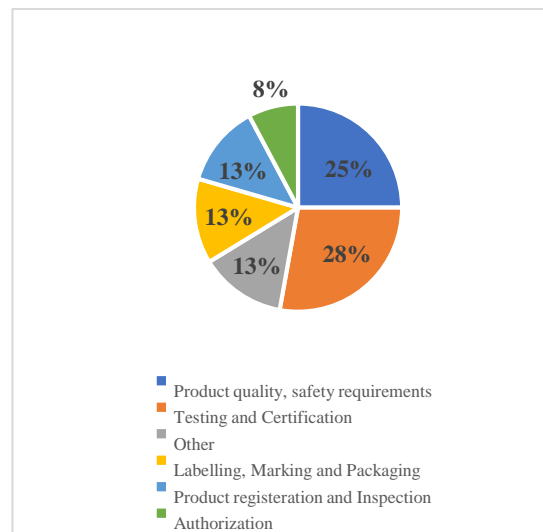


Figure 4: Requirements and conditions mentioned in the UAE's TBT Measures



Source: UNCTAD Trains

2.4 Non-Tariff Barriers

Most of the non-tariff issues have been solved with India-UAE CEPA. However, some of the problems which can act as a barrier in the future are:

(i) **Mandatory G-mark requirement for every Children's toy**

UAE requires a G-mark requirement for all the exported children's toys and this mark can be issued only by the agencies authorized by the GCC Standardisation Organisation. However, in India, there is no authorised agency to get G-mark, exporters have to send their consignments to places where agencies are situated. This makes Indian products uncompetitive in the UAE as the entire process is time-consuming and cost-intensive. Furthermore, during the conformity assessment procedure, physical samples of all products are required in a group and not just the representative item. The physical inspection of all items in a product group is burdensome and costly. This creates unnecessary obstacles to international trade. Thereby, it is suggested that the physical sampling should not be used for all the products in the group rather representative products shall be considered by the Notified Bodies¹¹.

(ii) **Complex custom clearance for textile products**

In UAE, customs clearance for local content is mandatory at docks which are complicated and lead to additional cost to the Indian exporters. Also,

¹¹ <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/TBT/M85.pdf&Open=True>

importing license documentation for these products is very complicated and time-consuming. This imposed disruptions and costs on Indian exporters. To improve the situation, India can ask UAE to lease down their custom clearance process and be more transparent. There can be a time limit for such clearances so that there would be no delay and the entire procedure go smoothly.

3. China

3.1 India-China Bilateral Trade

India's average bilateral merchandise exports with China for the time period 2017-2021, stood at USD 17.83 billion whereas imports were valued at USD 74.35 billion leading to a wider trade deficit of USD 56.52 billion. The top 5 export product categories which cover almost 50 percent of the total exports, at HS 2-digit were HS-29 Organic chemicals, accounting for 14 percent of the total exports followed by HS-26 Ores, slag, HS-27 Mineral oils and fuels, HS-52 Cotton, and HS-72 Iron and steel articles. Whereas, India's top 5 imports from China belong to the product groups of HS-85 Electric machinery and equipment (cover 32 percent of total imports), HS-84 Nuclear reactors and boilers, HS-29 Organic chemicals, HS-39 Plastic articles, and HS-31 Fertilisers. Detailed information in Annexure 2.

3.2 Non-Tariff Measures

For the period 2010-2018, China has notified its around 2630 NTMs notifications to its trading partners. These notifications covered NTMs such as SPS, TBT, Export related measures (licensing, permit requirements, certification by exporting country, etc), importing licenses, price shipment regulations, etc. Out of the all NTMs category notified, China has extensively used TBT regulations. Around 77 percent of the total notifications cover TBT regulations followed by export-related measures, SPS, etc. (Details in Annexure 3)

More on TBT and SPS measures, the regulations which were widely used by China while framing SPS measures were related to the requirements for quarantine and inspection, which defines the necessity to detain or isolate animals, and plants to avoid any spread of diseases. It is followed by traceability requirements which help to track the product through its different stages of production. More than 40 percent of SPS notifications defined such requirements. Concerning the TBT, notifications which include requirements for labelling and packaging were the highest with a share of 35 percent (around 708 notifications). Other requirements notified in TBT notifications were for product quality and safety, production processes, conformity assessments, etc as shown in figure 5 and 6.

Figure 5: Requirements and conditions mentioned in China's SPS Measures

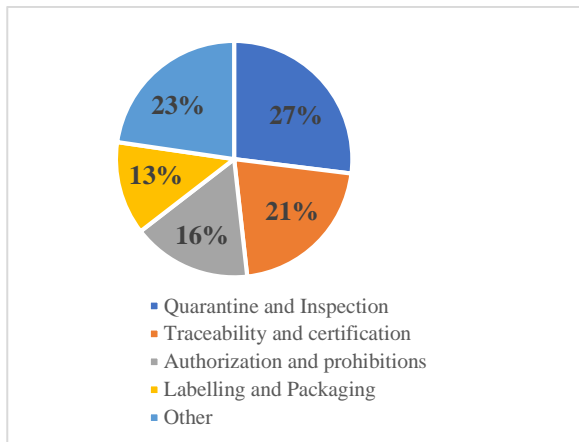
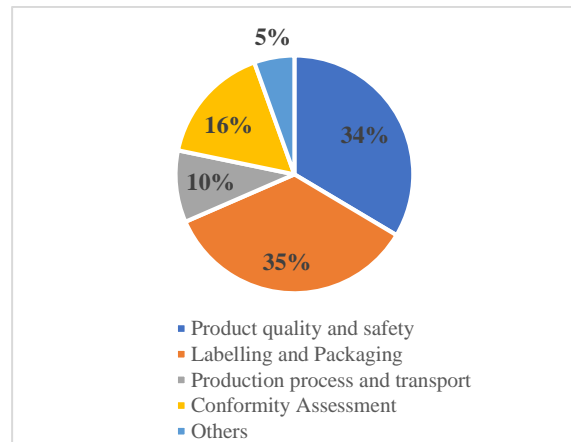


Figure 6: Requirements and conditions mentioned in China's TBT Measures



Source: UNCTAD Trains

3.3 India-China Bilateral Agreements

India and China are a part of the Asia Pacific Trade Agreement (APTA), formerly known as Bangkok Agreements. It is a preferential regional trade agreement signed in 1975. Apart from India and China, its other current members are Bangladesh, South Korea, Lao and Sri Lanka. On 29 September 2020, Mongolia acceded to the Asia Pacific Trade Agreement as its seventh member. This Agreement focuses on trade in goods with provisions on areas such as Rules of Origin, tariff liberalization, etc.

3.4 Non-Tariff Barriers

(i) Renewal of registration for export of Mangoes and Grapes

The export of mango and grapes to China is subject to the listing of approved facilities by the General Administration of Customs of the People's Republic of China (GACC) every year. Though, Indian Authorities have submitted dynamic list of Agricultural and Processed Food Products Export Development Authority (APEDA) that can also be verified through an online link, where these products have been registered after stringent recognition process by the team of APEDA and National Plant Protection Organization (NPPO). Still the process of submission of list is to be done every year followed by additional requirement of Video inspection. This re-registration processes every year by GACC and hosting the list of approved facilities on their website results in duplication of procedures, which in turn takes too much time, increased their transaction costs and act as a trade barrier to Indian Grapes and Mangoes.

(ii) **No redressal mechanism for Pharmaceutical products**

Unlike other countries, China did not provide second chances to test through a third-party lab, etc when products got rejected in random sampling due to non-compliance found while testing. Also, there is no redressal mechanism, and the ruling of the lab was considered final, wherein there is no choice to appeal or even contest the results. This came with a heavy financial cost on the company and with certain impact on the bilateral trade as well. For this, China can be requested to have at least third-party lab testing as followed by other countries, so that exporters have a chance to appeal for it.

(iii) **High Translation cost**

This is one of the biggest challenges which Indian exporters faced in China. The documents notified by China at the WTO which mentioned their standards and regulations are either incomplete or written in the Chinese language. Further, most of the time China did not mention the product category it is referring to, while notifying SPS/TBT notifications. This results in spending extra efforts and money by Indian exporters on translation and collecting all the relevant documents from different sources. One of the ways to mitigate such costs is if China shall adhere to the WTO-notified languages which are: English, French, and Spanish.

4. Bangladesh

4.1 India-Bangladesh Bilateral Trade

India's average merchandise exports to Bangladesh were valued at USD 10.37 billion for the period 2017-21 and imports from Bangladesh were USD 1.21 billion with a surplus of USD 9.16 billion. The top export to Bangladesh at HS 2-digit which cover more than 50 percent of total exports were HS-52 Cotton (covering 23 percent of total exports), HS-27 Mineral fuels, HS-87 Vehicles, HS-10 Cereals, and HS-84 Nuclear reactors and boilers. Whereas, India's top 50 percent of imports were from the products HS-62 Apparel and clothing, HS-53 Textiles, HS-15 Animal fats, etc. (Details in Annexure 2)

4.2 India-Bangladesh Bilateral Agreements

India and Bangladesh are part of 3 agreements; the Asia-Pacific Trade Agreement (APTA), the General System of Trade Preference (GSTP), and the South Asia Free Trade Agreement (SAFTA). Currently, these two nations do not have a bilateral trade agreement, however, India has announced to start of negotiations for a Comprehensive bilateral trade pact with Bangladesh during

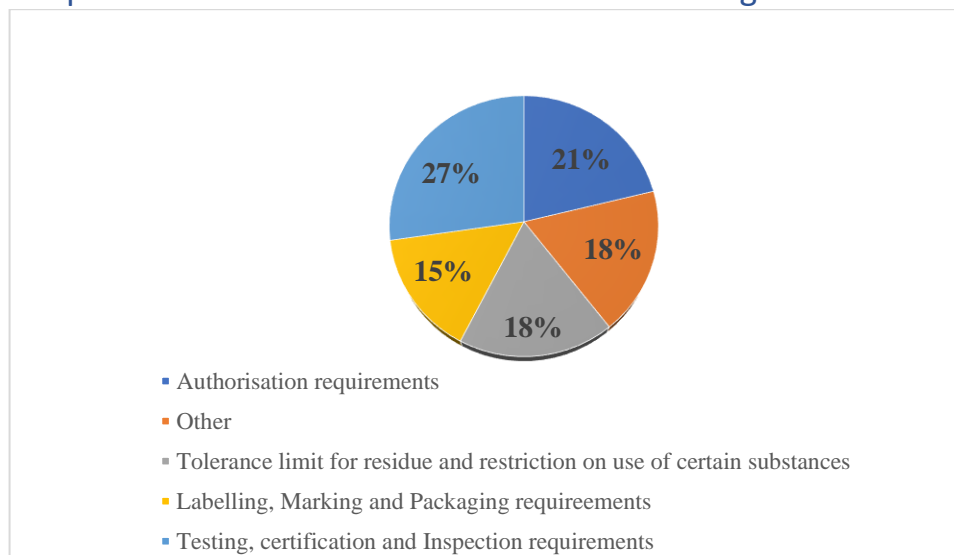
the visit of the Prime Minister of Bangladesh. The objective of such a comprehensive trade pact between the two will be to expand economic integration and prosperity among nations and help to boost the overall exports of India¹².

4.3 Non-Tariff Measures

In the period 2010-16, Bangladesh has put only 56 notifications for the imposition of various types of NTMs. These notifications mostly included the measures like SPS, TBT, Pre-shipment inspection, non-automatic import licensing, price control measures, and export-related measures. Among all the measures, the SPS measure was dominant with a share of around 58 percent followed by export-related measures, TBT, etc. This shows that Bangladesh is more focused on food safety and health while applying the NTM measures than others. (Annexure 3)

Focusing more on SPS measures, figure 7 below depicts the type of regulations that were noted under the SPS category. The highest number of SPS notifications (about 27 percent) were for testing, certification, and inspection requirements such as regulations defining the information directly related to food safety, which should be provided to the consumer. Authorization regulations that defined the requirements in the form of permits, or approval from a relevant government agency have a share of 21 percent in total notifications followed by others.

Figure 7: Requirements and conditions mentioned in Bangladesh's SPS Measures



Source: UNCTAD Trains

¹² <https://pib.gov.in/PressReleasePage.aspx?PRID=1857392>

4.4 Non-Tariff Barriers

(i) High cost of compliance for labelling requirements

As per the Food Safety (Labeling) Regulations 2017 of Bangladesh, Food Products exported to Bangladesh must be labelled in the Bengali language with many additional labelling requirements, even if the label of the product is already in English and any foreign language. On the other hand, in India, label should be in English or Hindi. These additional labelling requirements often add additional costs to the exporters exporting their products to Bangladesh. Further, there shall be no expression that demonstrates the improved quality of imported goods which could affect the market perception of Indian goods. It can be discussed with Bangladesh for labelling language to be fixed to English as it will remove the extra burden from Indian exporters and can improve the market access for Indian products. (Asian Development Bank, 2020)

(ii) Cumbersome requirements for Import License and Delays in Testing Samples

Bangladesh's Mandatory Certification Marks Scheme (MCMS) requires a special license when importing products. The 166 products classified under the MCMS scheme are aggregated into food and agricultural products (71 items), chemical products (42 items), jute and textile products (11 products), electricals and electronic products (27 items), and engineering products (15 items). The procedure for obtaining a such special license is cumbersome and valid for only three years and requires frequent renewal to maintain its validity which adds an additional cost and time.

5. Singapore

5.1 India-Singapore Bilateral Trade

India's average merchandise exports to Singapore for the time period 2017-2021 stood at USD 10.37 billion whereas imports were valued at USD 14.15 billion with a trade deficit of USD 3.78 billion. The top export product categories which cover almost 80 percent of total exports were HS-27 Fuels (covering more than 50 percent of total exports), HS-89 Ships, boats, HS-84 Nuclear Reactors and Boilers, HS-71 Gems and Jewellery, and HS-29 Organic Chemicals. India's top imports from Singapore belong to the product groups of HS-85 Electrical machinery equipment with a share of 18 percent, HS-84 Nuclear reactors, boilers, HS-27 Mineral Fuels, HS-29 Organic chemicals, etc. (Detailed table in Annexure 2)

5.2 India-Singapore Bilateral Agreements

On 8th April 2002, India and Singapore established a Joint Study Group to examine the benefits of the proposed agreement. The report was signed on the 8th of April 2003 by their respective Ministers and the recommendations were set as a framework for beginning the negotiations. The motive was to expand market access for both nations and enhance economic and social benefits and ensure high and steady growth through the expansion of trade and investment flows. The India-Singapore Comprehensive Economic Cooperation Agreement (CECA) was signed on 29th June 2005 and entered into force on 1st August 2005.

5.3 Non-Tariff Measures

Singapore has imposed around 111 NTMs notifications for the period 2010 to 2018. The maximum notifications (around 45 percent of the total) were related to the TBT regulations followed by SPS, non-automatic import licensing, etc with the objective of protecting human life and the health of animals, plants and environment with details in Annexure 3.

With respect to the SPS measures, Singapore was more concerned with imposing restrictions on different substances like the use of fertilizers, other metals, etc. Around 58 percent of the notifications specified such restrictions followed by labelling and others. For TBT, around 31 percent of the notifications described the requirements for labelling followed by regulations on product identity, safety, and hygiene as shown in the figure 8 and 9 below.

Figure 8: Requirements and conditions mentioned in Singapore's SPS Measures

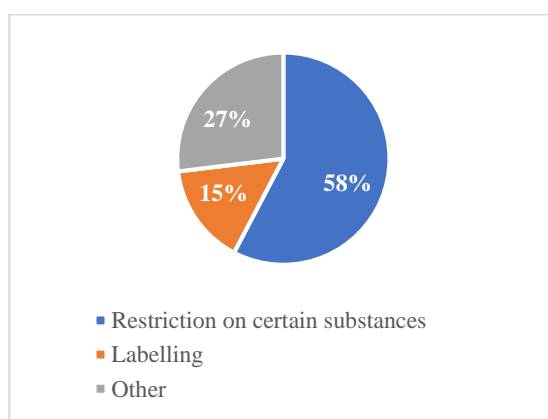
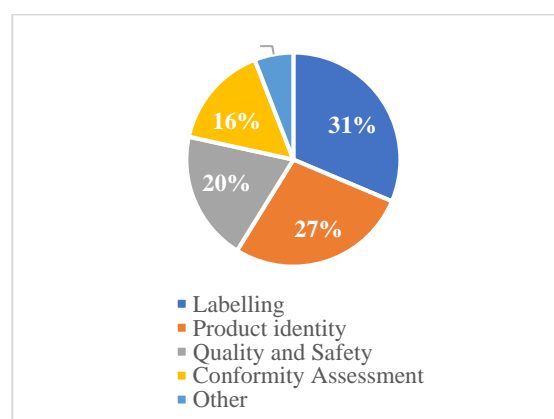


Figure 9: Requirements and conditions mentioned in Singapore's TBT Measures



Source: UNCTAD Trains

With respect to the Coverage and Frequency Ratio of TBT measures, the highest TBT coverage ratio on fuels is 99.77 percent, which is one of the top Indian exported products in Singapore. The frequency ratio is 41.18 percent for the same sector. This shows that less than half of the fuel category products were covered under the TBT regime, but in terms of the value of imports for such products, around 99 percent of the total value of imports is exposed to the TBT measures. Most of the regulations in the fuel sector are related to authorization, labelling, and packaging. On the other hand, the trade of Gems and Jewellery sector, does not face much from NTMs. Its frequency ratio and coverage ratio are low at 4.26 percent and 7.77 percent respectively.

5.4 Non-Tariff Barriers

No relevant market access issues have been notified by the stakeholders as the India-Singapore Comprehensive Economic Cooperation Agreements have already resolved the issues to an extent.

6. United Kingdom

6.1 India-United Kingdom Bilateral Trade

For the period 2017-21, India's average exports to the UK stood at USD 9.27 billion while imports from the UK were valued at USD 6.21 billion, leading to a India's surplus of USD 3.06 billion. The top export categories of India to the UK at HS 2-digit were comprised of HS-84 Nuclear reactors and boilers which cover around 11 percent of total bilateral export followed by HS-61,62 Apparel and Clothing, HS-71 Gems and Jewellery, HS-30 Pharmaceuticals, etc. Whereas, India's top import sectors from the UK were HS-71 Gems and Jewellery, HS-84 Nuclear reactors, HS-85 Electrical machinery, HS-76 Aluminium articles, etc shown in the Annexure 2.

6.2 India-United Kingdom Bilateral Agreements

On 31st January 2021, the UK formally took an exit from the European Union (EU) and was free to change its regulations as an independent body. Soon after BREXIT, India launched its Free Trade negotiations with the UK which envisage for doubling of bilateral trade by 2030. According to the Minister of Commerce and Industry, Free Trade Agreement with the UK shall provide certainty, predictability, and transparency and will further help to generate a more liberal, facilitative, and competitive services regime.

With the ease of regulations on both Tariffs and Non-tariff measures like SPS, TBT, etc are expected to rise in exports in various sectors like Leather,

Textile, Agriculture products, Gems, and Jewellery, etc. Additionally, the agreement will further help to form various Mutual Recognition Agreements (MRAs) in different sectors like Pharmaceuticals which could provide additional market access to India. The minister expressed that addressing such market access issues will provide gain to businesses and is expected to create employment opportunities both direct and indirect in both nations.

6.3 Non-Tariff Measures

From 2010 to 2018, the UK notified around 128 notifications to its trading partners related to the imposition of non-tariff measures. The top category of NTMs used by the UK were SPS, TBT, import inspections, and quantity control measures. Out of 128 total notifications, 99 notifications (around 77 percent of the total) include TBT measures followed by SPS, import licensing, and quantity control measures. The detailed table is attached in the Annexure 3.

More on SPS and TBT Measures, about 33 percent of the SPS notifications were notifying the restrictions on the limit of residues and other substances in food and feed, followed by geographical restrictions, traceability procedures, etc. While TBT measures notified the requirements for certification (cover 27 percent of notifications), product quality (21 percent), labelling, testing process, and others as depicted in the figures 10 and 11 below.

Figure 10: Requirements and conditions mentioned in the UK’s SPS Measures

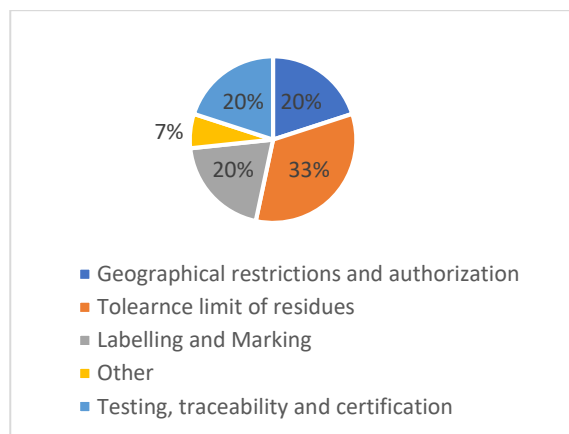
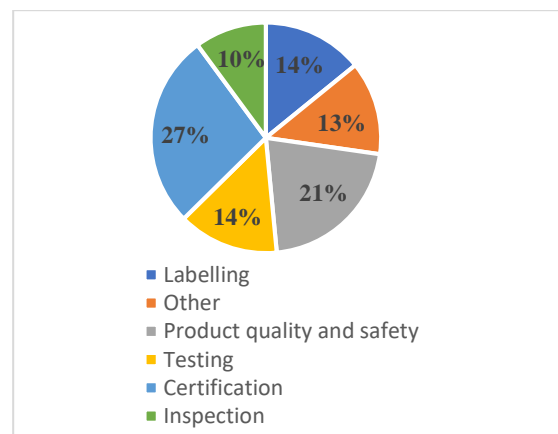


Figure 11: Requirements and conditions mentioned in the UK’s TBT Measures



Source: UNCTAD, Trains

6.4 Non-Tariff Barriers

There are certain challenges that India faced while exporting to the UK and is expected that India-UK FTA negotiations will take into account all these barriers

and will improve the market access of India's products in the UK market. Apart from the below mentioned issues, there are issues in sectors like wine, dairy which have to be taken up by both nations for smooth market access.

(i) EC Marking certificate for textile products

Post-Brexit, the UK has adopted EC Regulation for marking Personal Protective Equipment (PPE), more specifically on Oven Gloves and Pot Holders. The CE Marking indicates the conformity of the product with the Union Legislation applying to the product. This certificate includes specific requirements for information like size, colour, filling, fabric material etc. However, Indian exporters have raised issues that the colour and product design vary from importer to importer, however, the EC Certificate remains valid for a particular design. This means for every new design and colour, Indian exporters have to seek a new certification, resulting in additional delays and costs. Obtaining a certificate takes 12 to 16 weeks and the cost of obtaining it is between INR 150,000 and 200,000. Such certificates have a high impact on small consignments. India can request the UK to have a generalized CE Mark certificate for all designs and colours, so that no extra efforts and costs have to be put up by Indian manufacturers and exporters.

(ii) Stringent Aflatoxin limits on products such as peanuts and spices

Post-BREXIT, the UK still follows the EU's stringent Aflatoxin limits. For instance, the present EU level of Aflatoxin in Peanuts for direct human consumption is 2 µg/kg for B1 and 4 µg /kg total Aflatoxin, 8 µg/kg B1 & 15 µg/kg total Aflatoxin for further processing. However, Codex (WHO standards) has set the maximum limit at 15 PPB (Parts Per Billion) for peanuts. Also, in spices, both the EU and UK have set a stringent limit for aflatoxin B1 and Aflatoxin total that is 5 parts per billion (PPB) and 10 PPB respectively applicable for chilies and several other spices. However, the US permits aflatoxin levels (total) of 20 PPB for all spices. Since the UK is not a part of the EU, India can request the UK to increase the permissible limit on Aflatoxins.

7. Saudi Arabia

7.1 India-Saudi Arabia Bilateral Trade

India's average exports to Saudi Arabia for the period 2017-21 were valued at USD 6.36 billion and average imports from Saudi Arabia were valued at USD 25.54 billion with a trade deficit of USD 19.18 billion. The top export products in HS 2-digit categories, which cover about 50 percent of the total export value were HS-10 Cereals, HS-27 Mineral Fuels, HS-29 Organic chemicals, HS-87

Automobiles and their parts, HS-84 Nuclear reactors and boilers, etc. Whereas, top India's imports were HS-27 Mineral Fuels, HS-29 Organic chemicals, HS-31 Fertilizers, HS-39 Plastic and its articles, and HS-76 Aluminium and its articles. (Detailed table in Annexure 2)

7.2 India-Saudi Arabia Bilateral Agreements

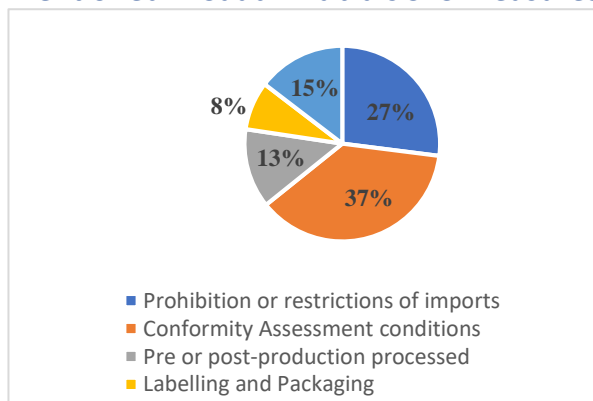
India and Saudi Arabia have signed agreements or MOUs in the fields of housing, tourism, investments, and exchange of audio-visual programs, and also an agreement was signed to pave way for Saudi Arabia to join the International Solar Alliance (ISA). However, these both nations have not signed any trade agreements till now.

7.3 Non-Tariff Measures

From 2010 to 2020, Saudi Arabia notified around 531 notifications to its trading partners, for the imposition of Non-tariff measures. The top categories of NTMs used by Saudi Arabia were TBT, covered about 52 percent of the notifications followed by SPS (25 percent of the total notifications), export-related measures such as, etc.

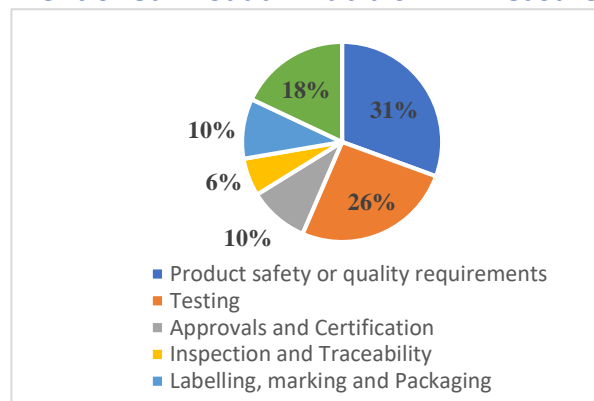
More on SPS and TBT measures, in the SPS category, Saudi Arabia has notified around 37 percent of the notifications which concerned with the conformity assessment procedures such as testing, inspections or certifications. The other regulations notified by Saudi Arabia were on restrictions or prohibition of imports due to sanitary and phytosanitary risks. About 27 percent of the notifications notified such prohibitions followed by other pre-or-post production processes and others. Whereas, 31 percent of TBT notifications specified regulations or conditions on product safety and quality such as fire resistance, durability etc. It followed by requirements on testing, labelling etc as shown in figure 12 and 13.

Figure 12: Requirements and conditions mentioned in Saudi Arabia's SPS Measures



Source: UNCTAD Trains

Figure 13: Requirements and conditions mentioned in Saudi Arabia's TBT Measure



8. Malaysia

8.1 India-Malaysia Bilateral Trade

India's average merchandise exports to Malaysia were valued at USD 6.31 billion for the period 2017-21 and imports from Malaysia stood at USD 10.08 billion, leading to a trade deficit of USD 3.77 billion. Major commodities of exports from India to Malaysia were under the categories of HS-27 Mineral fuels which has a share of 28 percent out of total average exports followed by HS-76 Aluminium articles, HS-29 Organic chemicals, HS-2 Meat and edible meat, HS-84 Nuclear reactors, and boilers. Whereas, the top import products by India from Malaysia were under the category of HS-15 Animal fats and oils, HS-27 Fuels, HS-85 Electric machinery and equipment, HS-84 Nuclear reactors, HS-29 Organic chemicals, etc. The detailed table is attached in Annexure 2 below.

8.2 India-Malaysia Bilateral Agreements

India and Malaysia are a part of the India-ASEAN trade in Goods Agreement which came into force on 1st January 2010. Further, they both signed a bilateral Comprehensive Economic Cooperation Agreement (CECA) on 18th February 2011 that came into force on 1st July 2011. The agreement covered important economic areas such as Trade in Goods (both tariffs and non-tariff measures), Trade in Services, Investments, and Movements of Natural Persons. This further add value to the existing trade flow between the two nations and enhanced the economic and investment relations.

8.3 Non-Tariff Measures

For the period 2010 to 2018, Malaysia issued just about 153 non-tariff measures' notifications to its trading partners. Out of 153, the highest number of notifications were covered for export-related measures such as service charge, export registration requirements, etc followed by TBT, SPS notifications as shown in Annexure 3 below.

Malaysia has not published many SPS regulations and most of them specified the requirements for labelling and packaging, production processes and for storage and transportation. For TBT regulations, Malaysia imposed around 35 percent of notifications to specify the requirements on conformity assessments such as necessities and procedures for testing, inspection, traceability, etc. 30 percent were for labelling requirements which regulate the kind, colour, labels, printing for safety of products as shown in figure 14 and 15.

Figure 14: Requirements and conditions mentioned in Malaysia's SPS Measures

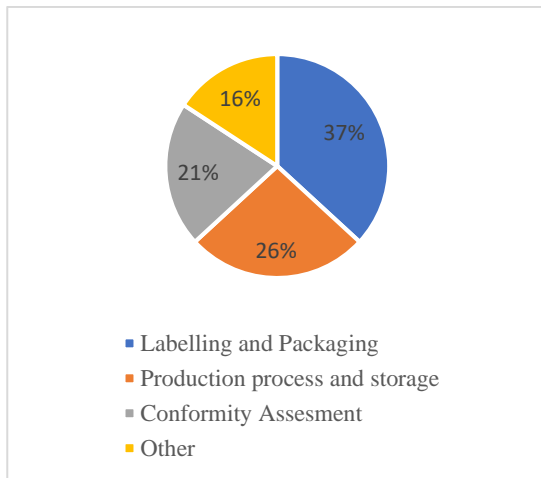
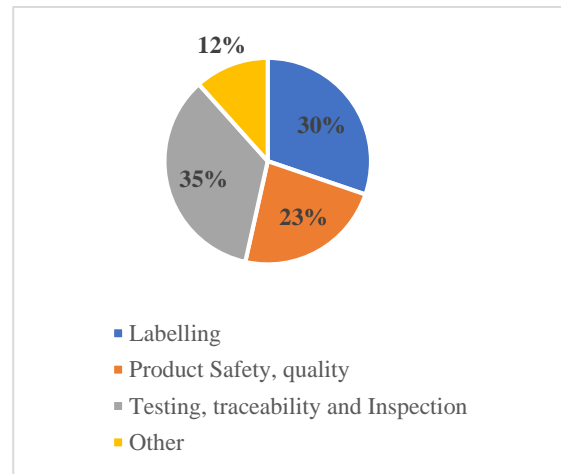


Figure 15: Requirements and conditions mentioned in Malaysia's TBT Measure



Source: UNCTAD Trains

8.4 Non-Tariff Barriers

Mandatory testing in domestic facilities for pharmaceutical products leading to additional costs and time

Indian exporters exporting pharmaceutical products to Malaysia need to comply with mandatory testing by Bioequivalence (BE) centres. To apply for these tests, Indian companies have to contact the registered Malaysian local authorities which will apply on their behalf. The foreign authorities cannot directly apply to BE centres. This mandatory requirement delays the entire process and also cost higher to the exporters. To ease the procedural delays and costs, India requested the Malaysian National Pharmaceutical Control Bureau to allow Indian BE centres to apply directly for conducting BE studies for generic products exported from India. However, no action has been taken up by Malaysia.

9. Vietnam

9.1 India-Vietnam Bilateral Trade

India's average merchandise exports to Vietnam are valued at USD 6.22 billion for the period 2017-21 and India's average imports from Vietnam, were valued at USD 6.61 billion, leading to a deficit of USD 0.39 billion. The top export products of India at HS 2-digit, were HS-2 Meat, HS-72 Iron and Steel products, HS-3 Fish, HS-52 Cotton, and HS-87 Automobile articles, etc. These products covered more than half of the total exports. For the same time

period, India’s 60 percent of imports were covered under HS-85 Electrical Machinery (with 47 percent of imports) followed by, HS-28 Inorganic Chemicals, HS-74 Copper articles, HS-84 Nuclear reactors and boilers, HS-73 Iron and steel articles, etc. as shown in the table attached in Annexure 2.

9.2 India-Vietnam Bilateral Agreements

Currently, these two nations do not have a bilateral trade agreement, however India and Vietnam are a part of the India-ASEAN trade in Goods Agreement which came into force on 1st January 2010.

9.3 Non-tariff Measures

For the period 2010 to 2020, Vietnam has issued about 1977 non-tariff measures’ notifications to its trading partners. Out of total notifications, around 44 percent of notifications (862) were mentioned the TBT regulations followed by Export-related measures, SPS, non-automatic import licensing, etc as shown in Annexure 3 below.

Around 55 percent of the total SPS notifications were mentioned the criteria for Conformity Assessments procedures, included in certifications, inspections, testing, quarantine conditions of animals and plants, etc. The other requirements were on labelling, packaging, prohibitions of imports due to SPS risks, and others. While TBT measures were more related to the labelling, testing requirements. Around 24 percent of the total TBT notifications were notified the labelling conditions followed by inspection processes, certification necessities, etc as shown in figure 16 and 17.

Figure 16: Requirements and conditions mentioned in Vietnam’s SPS Measures

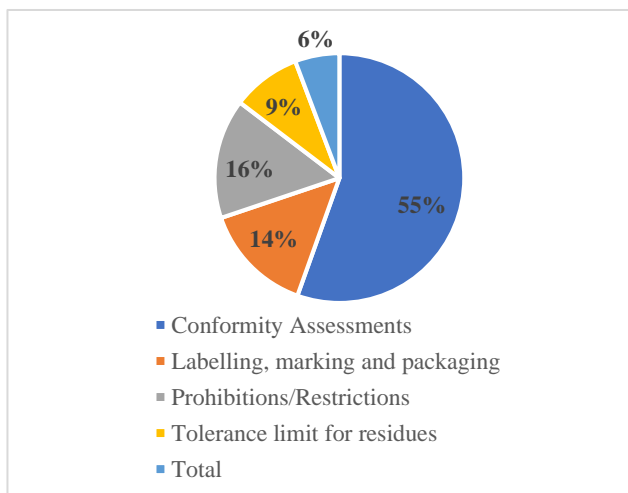
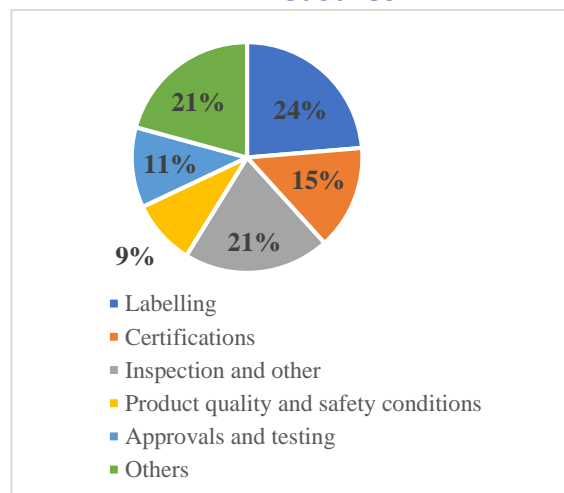


Figure 17: Requirements and conditions mentioned in Vietnam’s TBT Measures



Source: UNCTAD Trains

With respect to the Coverage and Frequency Ratio of TBT measures, the highest TBT coverage ratio was on textiles of 98.52 percent, which is one of the most potential sectors of India. The frequency ratio is 98.96 percent for the same sector. This shows that both in terms of number of products and value of imports, textile sector has a significant impact of NTMs in Vietnam. On the other hand, SPS Coverage and Frequency ratio for food products are also high with 91.66 percent and 99.03 percent respectively.

9.4 Non-Tariff Barriers

No relevant market access issues have been notified by the stakeholders as the India-Singapore Comprehensive Economic Cooperation Agreements have already resolved the issues to an extent.

10. Japan

10.1 India-Japan Bilateral Trade

India's average merchandise exports to Japan are valued at USD 4.95 billion for the period 2017-21 and India's average imports from Japan, were valued at USD 12.30 billion, leading to a deficit of USD 7.35 billion. The top export products of India in Japan market at HS 2-digit were HS-27 Mineral fuels, HS-29 Organic chemicals, HS-3 Fish, HS-71 Gems and Jewellery, HS-84 Nuclear reactors, etc. These products covered more than 40 percent of the total exports. For the same time period, India's 50 percent of imports were covered under HS-84 Nuclear reactors (with 23 percent of imports) followed by HS-85 Electrical Machinery, HS-72 Iron and Steel products, HS-39 Plastic products, and HS-74 Copper articles as shown in the table attached in Annexure 2.

10.2 India-Japan Bilateral Agreements

On December 2006, the decision was taken by both countries to launch the negotiations for the conclusion of the India- Japan Comprehensive Economic Partnership Agreement (IJEPA). IJEPA was signed on 16th February 2011 and came into force on 1st August of the same year. The agreement believed that such a bilateral agreement would enhance cooperation among nations and would lead to the improvement in economic efficiency, and develop the trade and investment infrastructure. The Agreement comprises measures on the liberalisation of trade in goods, trade in services, and investment and implements cooperation in a number of identified areas.

10.3 Non-Tariff Measures

Between 2010-2017, Japan has notified around 897 notifications for imposition of various non-tariff measures. The type of NTMs which were used extensively by Japan were TBT and SPS, where notifications for TBT measure were around half of the total notifications, followed by SPS, export-related measures, non-automatic import licensing and others. (Details in Annexure 3)

Focusing on SPS and TBT measures, in the SPS category, regulations were more segregated and comprehensive. Regulations related to the hygiene requirements such as criteria for using a microorganism, analytical methods for detection or quantification in the final product, etc. are highly used by Japan. Around 28 percent of the total SPS notifications are covered for hygiene requirements followed by limits on MRLs, pre and post production processes, conformity assessment conditions such as testing, inspection etc. Whereas, TBT notifications notified regulations on conformity assessments like on product registration, testing, certification followed by pre and post conditions on food safety, quality, hygiene and others. (Figure 18 and 19)

Figure 18: Requirements and conditions mentioned in Japan's SPS Measures

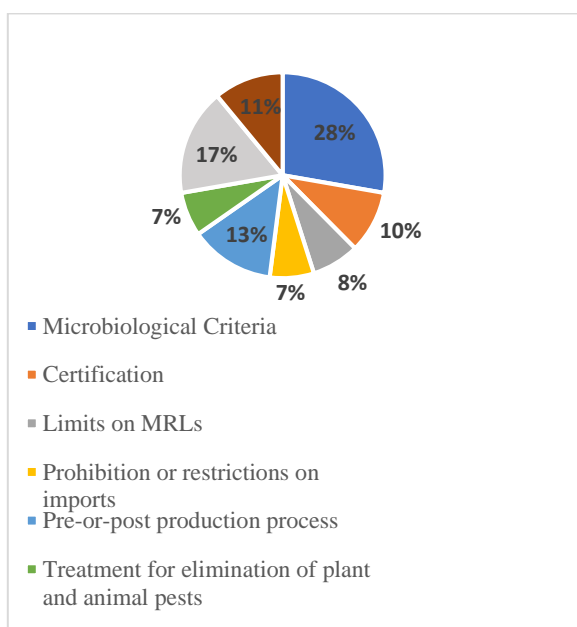
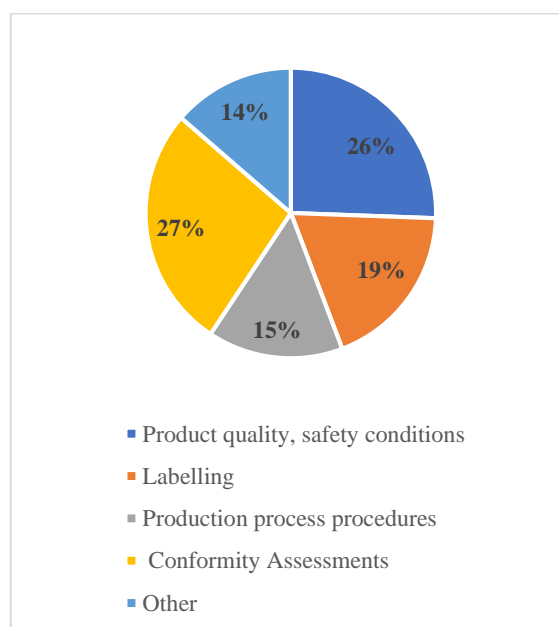


Figure 19: Requirements and conditions mentioned in Japan's TBT Measures



Source: UNCTAD, Trains

10.4 Non-Tariff Barriers

Delay in inspection system for sports goods and toys

Under Japan Food Sanitation Law (JFSL), lab-verified compliance with Sections IV and V of the JFSL is mandatory for applicable children's products before they can enter the Japanese market. In addition, all toys compliant with the ST standard must display the Safety Toy Mark (ST Mark). Japan Toys Association has nominated agencies to test and certify toys meant for the Japanese market. Unfortunately, no agencies/ labs in India are assigned or accredited to carry out such tests. Due to this, toy manufacturers have to send their entire consignments to Japan (as 100 percent testing is mandatory) for lab testing and certification, resulting in avoidable delays and high additional costs to exporters.

III. CONCLUSION

The study highlights that there is a significant rise in the imposition of NTMs by members to curb their trade for safety or for creating unnecessary obstacles to trade. The most used NTMs by them are SPS and TBT, with the primary objective to protect the health of humans, plants, animals, and the environment and sometimes use for National Security and or to prevent deceptive practices. However, there are challenges with such measures that member countries, including India, faced. First is transparency in notifying NTMs. Unlike tariffs, NTMs are more subjective and comprehensive in nature. It includes different legal documents, detailed information on standards, technical regulations, production procedures, etc.

However, it is observed that while notifying such details, member countries generally provide incomplete information to their partner members and are not even available in any single window. For instance, sometimes, while notifying SPS or TBT notifications, they do not define the exact HS codes on which the regulations have to be imposed or define their regulations in their own local languages. Also, the documents which they referred to are not available in the public domain, which sometimes includes a charge for accessing such documents. Such practices create confusion or doubt in the mind of the exporters and include high costs as well, which hampers their exports at the time of loading of consignments.

Though there exists a provision for 'Transparency' under the WTO Agreements, that states that all the related information shall be available to the trading partners and there should be proper explanations for it, still partners use such practices. Therefore, it is necessary for member countries to adhere to the transparency provision and notify all the key details in regular terms and in the official language as specified by WTO.

The second issue is the trend of using stringent requirements on products by trading partners. As discussed above, most of the Indian exporters faced the issue of complex and time-taking procedures for authorization, clearances, or for mandatory testing at laboratories. Additionally, some countries also imposed their standards and regulations which are not aligned with international standards. Due to these, exporters face high costs for meeting such rigorous requirements. As sometimes, they have to change the production processes and might lack infrastructure or production technology, etc, which impacts their overall exports internationally. It is understood that there are no alternatives than to follow safety and health security standards

and other requirements. However, if member countries are using their own regulations and conformity assessment procedures and have an equivalent level of protection or fulfilled the same objectives, then they can go mutually for Equivalence or Mutual Recognition Agreements (MRAs). These agreements ensure that though the regulations or conformity assessments are different, the objective related to safety, health, and others are being fulfilled by the trading country.

A country like India, which is continuously putting efforts into safety standards and are aligning its standards with international standards, should work on having such agreements. Also, there should be continuous updates and ensure suitable technical infrastructure, and awareness programs to build regulations and requirements according to the change in the living standards and for the protection of the environment. These updates and safety requirements will help in bringing down the overall costs of exporters and also reduce the delays in the flow of products.

Such steps will also help to boost small-sized exporters' exports as they would not have to meet any additional requirements than domestically and such practices will also reduce the scope of creating unnecessary obstacles by member partners.

Apart from these issues, this study also highlights that partner countries have started notifying more complex and stringent trade policy measures. For illustration, the type of conformity assessment procedures or regulations which are used by countries is beyond the scope of existing WTO Agreements. The type and frequency of SPS and TBT notifications imposed by WTO member countries are more advanced and wide-ranging. Also, the barriers mentioned above, which are notified by various stakeholders are frequently related to the requirements and procedures. This shows that with progress in time and with advanced technology, the existing laws of SPS and TBT Agreements are not suitable for the advanced regulations. There should be a time-to-time update in the existing WTO Agreements, so that a smooth and transparent flow of goods can be followed by member countries.

The intersection of barriers and measures are need to be examined more carefully by the WTO and should frame additional provisions to prevent the use of such barriers. In addition to it, since there exists a clear distinction between an NTM and NTB though a thin layer, WTO shall consider replacing the term 'TBT' i.e., Technical Barriers to Trade with Technical Measures to Trade (TMT). As nowadays, every measure cannot be termed as a barrier. It will become easier for member countries to differentiate between the health protectionist regulations and trade restrictive regulations.

UNCTAD NTMs Classifications

Table 1: Chapter-wise Category of NTMs Defined by UNCTAD

Chapter	Non-Tariff measure	Sub-category examples
A	Sanitary and Phyto-sanitary measures (SPS)	<ul style="list-style-type: none"> • Tolerance limit on Residue and on other substances • Labelling, marking, storage requirements, conformity assessments for food products • Treatment procedure for pest-free or disease-free
B	Technical Barriers to Trade (TBT)	<ul style="list-style-type: none"> • Licensing • Labelling, Marking, packaging • Regulations, Standards, conformity assessment procedures (CAPs)
C	Pre-shipment inspection and other formalities	<ul style="list-style-type: none"> • Import Monitoring • Market Surveillance
D	Contingent trade-protective measures	<ul style="list-style-type: none"> • Anti-dumping duties • Countervailing and safeguard measures
E	Import licensing, quotas, and other restrictions, are not included in SPS and TBT	<ul style="list-style-type: none"> • Non-automatic import licensing • Quotas and prohibitions
F	Price control measures	<ul style="list-style-type: none"> • Export price restraint
G	Finance measures	<ul style="list-style-type: none"> • Advance payments
H	Measures affecting competition	<ul style="list-style-type: none"> • State-trading enterprises
I	Trade-related investment measures	<ul style="list-style-type: none"> • Local content measures
J	Distribution Restrictions	<ul style="list-style-type: none"> • Restrictions or prohibition on the sale of goods
K	Restrictions on post-sales services	<ul style="list-style-type: none"> • Measures prohibiting or restricting access to domestic post-sale services channels
L	Subsidies and other forms of support	<ul style="list-style-type: none"> • Grants or credit support • Price regulation
M	Government procurement restrictions	<ul style="list-style-type: none"> • Market access restrictions • Collateral restrictions
N	Intellectual property	<ul style="list-style-type: none"> • Patents, copyrights, etc.
O	Rules of origin	<ul style="list-style-type: none"> • Preferential and Non-preferential • Wholly obtained • Cumulation
P	Export-related measures	<ul style="list-style-type: none"> • Export Restrictions • Production and post-production requirements • Export formalities

Source: UNCTAD, 2019

Table 2: India's Top 10 Export Destinations Over 2017-21

Sl.No.	Name of the Country	Average Exports (2017-21) USD Billion	Share in Total Exports (Per Cent)
1	USA	56.23	16.9
2	UAE	26.37	7.9
3	China	17.83	5.4
4	Hong Kong	11.96	3.6
5	Bangladesh	10.37	3.1
6	Singapore	10.10	3.0
7	UK	9.27	2.8
8	Germany	8.78	2.6
9	Netherland	8.49	2.6
10	Nepal	7.60	2.3
11	Belgium	6.81	2.1
12	Saudi Arab	6.36	1.9
13	Malaysia	6.31	1.9
14	Vietnam Soc Rep	6.22	1.9
15	Italy	5.84	1.8
	Total (Top 15 Countries)	198.54	59.8
	Total Exports	332.15	

Source: Department of Commerce, Ministry of Commerce and Industry, GoI

Country-wise Detailed Tables on India's Top HS 2-Digit-wise Exports and Imports

Table 3: India's top HS 2-digit-wise Exports and Imports to the United States of America for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports)
Exports			
1	71-gems and jewellery	10.63	19
2	30-Pharmaceutical products	6.01	11
3	84-Nuclear Reactors	4.24	8
4	27-Mineral Fuels	2.71	5
5	63-Other made-up textile articles	2.69	5
Imports			
1	27-Fuels	9.02	27
2	71-Gems and Jewellery	5.83	17
3	84-Nuclear reactors, boilers	3.7	11
4	85-Electrical machinery and equipment	1.84	5
5	29-Organic Chemicals	1.66	5
Total average Exports (2017-21)		56.23	
Total average Imports (2017-21)		34.04	
Trade Balance		22.19	

Source: Department of Commerce, Ministry of Commerce and Industry, GoI

Table 4: India's top HS-2 digit-wise Exports and Imports to the UAE for 2017-21(Values in USD Billion)

Rank	HS 2-Digit	Value(in USD Billion)	Average Share (% of Total Exports/Imports)
Exports			
1	71- Gems and Jewellery	7.68	29
2	27-Minerals and Fuels	5.15	20
3	85-Electrical machinery and equipment	1.88	7
4	61-Apparel and clothing	1.12	4
5	89-Ships and Boats	1.06	4
Imports			
1	27- Fuels	14.22	46
2	71-Gems and Jewellery	10.09	33
3	39-Plastic articles	0.93	3
4	89-Boats and ships	0.61	2
5	72-Iron and Steel	0.6	2
Total Exports		26.37	
Total Imports		30.65	
Trade Balance		(-) 4.28	

Source: Ministry of Commerce and Industry, GoI

Table 5: India's top HS-2 digit-wise Exports and Imports to China for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports/Imports)
Exports			
1	29-Organic Chemicals	2.57	14
2	26-Ores, slag and ash	2.35	13
3	27-Mineral fuels and oils	1.88	11
4	52-Cotton	1.22	7
5	72-Iron and Steel	1.02	6
Imports			
1	85-Electrical machinery and equipment	23.80	32
2	84-Nuclear reactors and boilers	14.82	20
3	29-Organic chemicals	9.03	12
4	39-Plastic and its articles	2.96	4
5	31-Fertilizers	1.89	3
Total Exports		17.83	
Total Imports		74.35	
Trade Balance		(-) 56.52	

Source: Ministry of Commerce and Industry, Gol

Table 6: India's top HS-2 digit-wise Exports and Imports to Bangladesh for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports/Imports)
Exports			
1	52-Cotton	2.34	23
2	27-Mineral fuels, oils and other products	1.1	11
3	87-Vehicles	0.91	9
4	10-Cereals	0.89	9
5	84-Nuclear reactors and boilers	0.66	6
Imports			
1	62-Articles of apparel and clothing (not knitted and crocheted)	0.24	20
2	53-Other textile fibres	0.13	11
3	15-Animal or vegetable fats and oils	0.12	10
4	61-Articles of apparel and clothing (knitted or crocheted)	0.11	9
5	63-other made-up textile articles	0.08	7
Total average Exports (2017-21)		10.37	
Total average Imports (2017-21)		1.21	
Trade Balance		9.16	

Source: Ministry of Commerce and Industry, Gol

Table 7: India's top HS-2 digit-wise Exports and Imports to Singapore for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports/Imports)
Exports			
1	27-Mineral fuels, oils and other products	5.35	53
2	89-Sips, boats, and other floating structures	1.11	11
3	84-Nuclear reactors and boilers	0.76	7
4	71-Gems and Jewellery	0.57	6
5	29-Organic Chemicals	0.37	4
Imports			
1	85-Nuclear machinery and equipment	2.57	18
2	84-Nuclear reactors and boilers	2.43	17
3	27-Mineral fuels and oils	1.6	11
4	29-Organic Chemicals	1.39	10
5	39-Plastics and its articles	1.08	8
Total average Exports (2017-21)		10.37	
Total average Imports (2017-21)		14.15	
Trade Balance		(-)3.78	

Source: Ministry of Commerce and Industry, Gol

Table 8: India's top HS 2-digit-wise Exports and Imports to the United Kingdom for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports/Imports)
Exports			
1	84-Nuclear reactors and boilers	0.98	11
2	61-Apparel and Clothing, knitted or crocheted	0.73	8
3	62-Apparel and Clothing, not knitted and crocheted	0.73	8
4	71-Gems and Jewellery	0.66	7
5	30-Pharmaceuticals	0.54	6
Imports			
1	71-Gems and Jewellery	1.53	25
2	84-Nuclear reactors and boilers	0.98	6
3	85-Electrical machinery and equipment	0.4	6
4	90-Optical articles	0.31	5
5	76-Aluminum articles	0.31	5
Total average Exports (2017-21)		9.27	
Total average Imports (2017-21)		6.21	
Trade Balance		3.06	

Source: Department of Commerce, MoCI, Gol

Table 9: India's top HS 2-digit-wise Exports and Imports to Saudi Arabia for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports/Imports)
Exports			
1	10-Cereals	0.95	15
2	27-Mineral fuels and Oils	0.89	14
3	29-Organic Chemicals	0.65	10
4	87-Automobile	0.51	8
5	84-Nuclear reactors and boilers	0.33	5
Imports			
1	27-Mineral fuels and Oils	21.22	83
2	29-Organic Chemicals	1.2	5
3	31-Fertilizers	1.03	4
4	39-plastics and articles	0.76	3
5	76-Aluminium and articles	0.27	1
Total average Exports (2017-21)		6.36	
Total average Imports (2017-21)		25.54	
Trade Balance		(-) 19.18	

Source: Department of Commerce, Ministry of Commerce and Industry, GoI

Table 10: India's top HS 2-digit-wise Exports and Imports to Malaysia for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports/Imports)
Exports			
1	27-Mineral Fuels	1.76	28
2	76-Aluminium articles	0.89	14
3	29-Organic Chemicals	0.46	7
4	2- Meat	0.39	6
5	84-Nuclear Reactors and Boilers	0.30	5
Imports			
1	15-Animal or vegetable fats and oils	2.34	23
2	27-Mineral Fuels	1.90	19
3	85-Electrical machinery and equipment	1.00	10
4	84-Nuclear reactors and boilers	0.74	7
5	29-Organic Chemicals	0.52	5
Total average Exports (2017-21)		6.31	
Total average Imports (2017-21)		10.08	
Trade Balance		(-)3.77	

Source: Ministry of Commerce and Industry

Table 11: India's top HS 2-digit-wise Exports and Imports to Vietnam for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports/Imports)
Exports			
1	2- Meat	1.19	19
2	72-Iron and steel articles	0.93	15
3	3-Fish	0.73	12
4	52-Cotton	0.41	7
5	87-Vehicles other than railways	0.22	4
Imports			
1	85-Electrical machinery and equipment	3.12	47
2	28-Inorganic Chemicals	0.43	7
3	74-Copper and its articles	0.41	6
4	84-Nuclear reactors and boilers	0.39	6
5	73-Articles of iron and steel	0.22	3
Total average Exports (2017-21)		6.22	
Total average Imports (2017-21)		6.61	
Trade Balance		(-) 0.39	

Source: Ministry of Commerce and Industry

Table 12: India's top HS 2-digit-wise Exports and Imports to Japan for 2017-21 (Values in USD Billion)

Rank	HS 2-Digit	Value in USD Billion	Average Share (% of Total Exports/Imports)
Exports			
1	27-Mineral Fuels	0.66	13
2	29-Organic Chemicals	0.56	11
3	3-Fish	0.42	8
4	71-Gems and Jewellery	0.38	8
5	84-Nuclear Reactors and boilers	0.36	7
Imports			
1	84-Nuclear reactors and boilers	2.79	23
2	85-Electrical Machinery	1.29	11
3	72-Iron and Steel	1.04	8
4	39-Plastic and its articles	0.97	8
5	74-Copper and its articles	0.75	6
Total average Exports (2017-21)		4.95	
Total average Imports (2017-21)		12.30	
Trade Balance		(-)7.35	

Source: Department of Commerce, Ministry of Commerce and Industry, G

Category-wise NTMs Classification on India's Exporting Partners**Table 13: Category wise NTMs imposed by the USA**

Non-tariff measures	No. of Notifications
TBT	387
SPS	373
Non-automatic Import licensing and quantity control	39
Pre-shipment inspection	19
Contingent trade protective measures	70
Export related measures	54
Total	942

Source: UNCTAD Trains

Table 14: Category-wise NTMs Imposed by the UAE

Non-tariff measures	No. of Notifications
TBT	424
SPS	222
Export related measures	54
Import license	34
Pre-shipment inspections	22
Price control measures	21
Other	4
Total	781

Source: UNCTAD Trains

Table 15: Category-wise NTMs Imposed by China

Non-tariff measures	No. of Notifications
TBT	2027
Export related measures	268
SPS	141
Non-automatic Import license	115
Pre-shipment inspections	26
Price control measures	19
Other	34
Total	2630

Source: UNCTAD Trains

Table 16: Category wise NTMs Imposed by Bangladesh

Non-tariff measures	No. of Notifications
SPS	33
TBT	4
Export related measures	12
Import license	3
Pre-shipment inspections	2
Price control measures	2
Total	56

Source: UNCTAD Trains

Table 17: Category wise NTMs Imposed by Singapore

Non-tariff measures	No. of Notifications
TBT	51
SPS	26
Import license	15
Export related measures	9
Price control measures	9
Distribution restriction	1
Total	111

Source: UNCTAD Trains

Table 18: Category wise NTMs Imposed by the UK

Non-tariff measures	No. of notifications
TBT	99
SPS	15
Import licensing and quantity control	9
Pre-shipment inspection	3
Export related measures	2
Total	128

Source: UNCTAD Trains

Table 19: Category wise NTMs Imposed by Saudi Arabia

Non-tariff measures	No. of Notifications
TBT	278
SPS	137
Export-related measures	56
Non-automatic import licensing	22
Price-control measures	20
Pre-shipment inspection	13
Miscellaneous	5
Total	531

Source: UNCTAD, Trains

Table 20:Category wise NTMs Imposed by Malaysia

Non-tariff measures	No. of Notifications
TBT	43
SPS	19
Non-automatic import licensing	16
Export related measures	62
Other	13
Total	153

Source: UNCTAD Trains

Table 21:Category wise NTMs Imposed by Vietnam

Non-tariff measures	No. of Notifications
TBT	862
SPS	348
Non-automatic import licensing	266
Export related measures	375
Price control measures	38
Other	88
Total	1977

Source: UNCTAD Trains

Table 22:Category wise NTMs Imposed by Japan

Non-tariff measures	No. of Notifications
TBT	477
SPS	172
Export related measures	118
Non-automatic import licensing	52
Price control measures	38
Others	14
Total	897

Source: UNCTAD Trains

References

Asian Development Bank. (2020). *POTENTIAL EXPORTS AND NoN-TARIFF BARRIERS To TRADE Indian National Study*.

DGFT, European Commission. (2021). *Report to the Trade Barriers Regulation committee*. Retrieved from https://trade.ec.europa.eu/doclib/docs/2021/may/tradoc_159564.pdf

EXIM Bank. (2019). *Non-Tariff Measures on Indian Exports*. Export-Import Bank of India.

Organization, W. T. (2021). *MINUTES OF THE MEETING OF 10-12 NOVEMBER 2021*. WTO.

UNCTAD. (2013). *Non-Tariff Measures to Trade: Economic and Policy Issues for Developing Countries*. UNITED NATIONS PUBLICATION.

UNCTAD. (2019). *INTERNATIONAL CLASSIFICATION OF NON-TARIFF MEASURES*. United Nations Publications.

United States Trade Representative. (2021). *FOREIGN TRADE BARRIERS*. USTR.

UNITED STATES TRADE REPRESENTATIVE. (2022). *FOREIGN TRADE BARRIERS*. USTR.

World Trade Organization. (2022). *MINUTES OF THE MEETING OF 9-11 MARCH 2022*. WTO.