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Trade, Investment and Cooperation in Health Product and Services in the Asia-Pacific Region

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Trade, Investment and Innovation

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Trade, Investment and Cooperation in Health Product and Services in the Asia-Pacific Region

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Abstract

Globally, healthcare is a key sector for the overall well-being of a country and its population. By 2030, at least 60 percent of the global population will be living in Asia, and one in four will be over 60 years of age. As the COVID-19 pandemic highlighted the importance of the sector, it also accentuated the issue of insufficient and unequal access to essential health products and services all across the globe.

In Asia-Pacific, over the last few decades, countries have focussed on improving their healthcare sector and have been trying to achieve the targets set by SDG 3 – Ensure Healthy Lives and Promote Wellbeing for All at All Ages, and SDG 17 – Partnership for the Goals. Yet there are still considerable gaps across the countries, in terms of access to healthcare services and per capita healthcare expenditure. The different levels of development among countries and across sub-regions have resulted in a fragmented marketplace, infrastructure gaps in developing and least developed countries (LDCs), limited government funding, multiple regulatory regimes and standards, limited public-private partnerships and shortages of key healthcare products and personnel - some of these issues can be addressed through trade, cross-border investment and collaborations.

In this context, the paper analyses the coverage and commitments in the health sector in existing regional and bilateral trade agreements, frameworks, forums and other arrangements in the Asia-Pacific region. It also aims to understand the current status of regional and bilateral cooperation in the health sector in the region.

The paper found that the coverage of the health sector, both products and services, in the existing regional and bilateral trade agreements, and other arrangements across Asia-Pacific countries, is limited. Developing countries and LDCs, especially, have high tariffs while developed countries have rigid standards and requirements, which restrict trade flow. There are limited commitments in healthcare in the trade agreements and limited private sector engagements. Certain facilitating measures like regulatory cooperation and mutual recognition agreements are few and even if they are signed, these are not implemented in a time-bound manner. The COVID-19 pandemic brought forth various new challenges, like sporadic bans, export restrictions of critical COVID-19 equipment, supply chain disruption and data sharing related regulatory issues.

Government-to-government sharing of information, best practices and regulatory cooperation and multi-stakeholder engagements and collaborations across multiple platforms, can enhance trade, investment and cooperation in this sector, and support the developing countries and LDCs in meeting their SDG goals. The paper presents policy recommendations for Asia-Pacific member countries to leverage existing trade and other arrangements to facilitate trade and investment flows and have mutually beneficial collaborations.

Keywords: *Healthcare, Asia-Pacific, Trade Agreements, UN SDGs, Collaborations*

JEL Codes: F13, F15, F20, I18

Contents

List of Tables

List of Figures

List of Boxes

Acronyms and Abbreviations

AANZFTA	Australia-New Zealand FTA
ACEM	Australasian College for Emergency Medicine
ACTD	ASEAN Common Technical Dossier
ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
AFAS	ASEAN Framework Agreement on Services
AHMM	ASEAN Health Ministers' Meeting
AI	Artificial Intelligence
AMDD	ASEAN Medical Device Directive
APEC	Asia-Pacific Economic Cooperation
APHDA	ASEAN Health Development Agenda
APRU	Association of Pacific Rim Universities
AR	Augmented Reality
ASEAN	Association of Southeast Asian Nations
ATIGA	ASEAN Trade in Goods Agreement
ATISA	ASEAN Trade in Services Agreement
AYUSH	Ayurveda, Yoga, Naturopathy, Unani, Siddha, Sowa-Rigpa and Homeopathy
B2B	Business-to-Business
BCD	Basic Customs Duty
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BITs	Bilateral Investment Treaties
BOT	Build-Operate-Transfer
CAGR	Compound Annual Growth Rate
CDAC	Centre for Development of Advanced Computing
CDPCA	Contagious Disease Prevention and Control Act
CECA	Comprehensive Economic Cooperation Agreement
CEPA	Comprehensive Economic Partnership Agreement
CISFTA	Treaty on a Free Trade Area between Members of the Commonwealth of Independent States
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CSDT	Common Submission Dossier Template

CSR	Corporate Social Responsibility
CTH	Change in tariff heading
CVD	Countervailing Duty
DSS	Decision Support System
ECOTA	Economic Cooperation Organization Trade Agreement
EFTA	European Free Trade Association
EHR	Electronic Health Record
EMR	Electronic Medical Record
ENEA	East and North-East Asia
EoDB	Ease of Doing Business
EPA	Economic Partnership Agreement
ERIA	Economic Research Institute for ASEAN and East Asia
EU	European Union
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
G2B	Government-to-Business
G2G	Government-to-Government
GATS	General Agreement on Trade & Services
GDP	Gross Domestic Product
GE	General Electric
GII	Global Innovation Index
GMP	Good Manufacturing Practices
GPA	Agreement on Government Procurement
HS	Harmonised System
HSS	Health Systems Strengthening
HWA	Health Workforce Australia
ICER	International Centre of Excellence in Research
ICSID	International Centre for Settlement of Investment Disputes
IFC	International Finance Corporation
IGST	Integrated Goods and Services Tax
IHI	Institute for Healthcare Improvement
IIA	International Investment Agreement
IMF	International Monetary Fund
IPR	Intellectual Property Rights
ISDS	Investor-State Dispute Settlement

KII	Key Informant Interview
LDC	Least Developed Country
LMIC	Lower and Middle-Income Countries
M&E	Monitoring and Evaluation
MaV	Major Variations Products
MCI	Medical Council of India
MFN	Most Favoured Nation
MiV	Minor Variations Products
MoU	Memorandum of Understanding
MRA	Mutual Recognition of Agreement
MRI	Magnetic Resonance Imaging
NCA	North Central Asia
NCE	New Chemical Entities
NEHR	National Electronic Health Record
NGO	Non-Government Organisation
NHG	National Healthcare Group
NITI	National Institution for Transforming India
NLDCS	Non-Least Developed Contracting States
NTM	Non-Tariff Measure
OECD	Organisation for Economic Co-operation and Development
OTC	Over-The-Counter
PACER	Pacific Agreement on Closer Economic Relations
PHCs	Primary Health Centres
PHI	Public Health Foundation of India
PICTA	Pacific Island Countries Trade Agreement
PILA	Partners in Leprosy Action
PIPA	Personal Information Protection Act
PLM	Philippines Leprosy Mission
PPE	Personal Protective Equipment
PPP	Public Private Partnership
Q1	First Quarter
R&D	Research And Development
RCEP	Regional Comprehensive Economic Partnership
RMB	Renminbi
RoK	Republic of Korea

RoO	Rules of origin
RTA	Regional Trade Agreement
S1	First Half
S2	Second Half
SAARC	South Asian Association for Regional Cooperation
SAD	Special Additional Duty
SAFTA	South Asian Free Trade Area
SARS	Severe Acute Respiratory Syndrome
SATIS	SAARC Agreement on Trade in Services
SDG	Sustainable Development Goal
SEA	South-East Asia
SITC	Standard International Trade Classification
SMILE	Sistem Monitoring Imunisasi Logistik secara Elektronic
SOHMD	Senior Officials' Meeting on Health Development
SP	Specified Process
SPS	Sanitary and Phytosanitary Measures
SSWA	South and South-West Asia
SWS	Social Welfare Surcharge
T&CM	Traditional & Complementary Medicine
TBT	Technical Barriers to Trade
TCELS	Thailand Center of Excellence for Life Sciences
TCM	Traditional Chinese Medicine
TFDA	Thai FDA
TISMOS	Trade in Services Data by Mode of Supply
TKDL	Traditional Knowledge Digital Library
TLP	Trade Liberalization Program
TPP	Trans-Pacific Partnership
TRIPS	Trade-Related Aspects of Intellectual Property Rights
TTM	Thai Traditional Medicine
UHC	Universal Health Coverage
UN	United Nations
UNCPC	United Nations Central Product Classification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children's Fund

US	United States
VA	Value Added
VC	Venture Capital
WDI	Workforce Development Initiative
WHO	World Health Organization
WIPO	World Intellectual Property Organization
WISH	Wadhwani Initiative for Sustainable Healthcare
WITS	World Integrated Trade Solution
WTO	World Trade Organization
y-o-y	Year-On-Year


Section 1

1. Introduction

The Asia-Pacific region, comprising of more than 50 countries,[4] is the largest region in the world in terms of area and has the world's most populous countries like China (1.44 billion people) and India (1.39 billion people).[5] The region, which has developed, developing and least developed countries (LDCs), was one of the fastest growing regions in the world prior to the coronavirus (COVID-19) pandemic. However, during the pandemic, some countries have experienced a sharp decline in growth. While the International Monetary Fund (IMF) has predicted a strong rebound for the region and projected that it will remain the fastest growing region in the world with 4.9 percent growth in 2023, predictions on the performance of countries vary.[6] For example, China is projected to grow by 5.1 percent, but the recovery remains unbalanced because private consumption continues to lag amid repeated pandemic outbreaks and significant fiscal policy tightening. India is projected to grow by 6.9 percent in 2023 after a sharp decline in 2020. Countries continue to face the fear of resurgent of the virus and across all countries, addressing healthcare needs have put a strain on government budgets and there are concerns related to fiscal deficits. Further, the pandemic has accentuated the issue of insufficient and unequal access to essential health products and services among and within countries of the Asia Pacific.

Over the past decade, Asia-Pacific countries have focused on improving their healthcare sector and have been trying to achieve the targets set by the Sustainable Development Goal (SDG) 3 – 'Ensure healthy lives and promote wellbeing for all at all ages' – and SDG 17 – "Partnership for the Goals'. Asia-Pacific countries offer significant opportunities for collaborations to achieve SDG 3. However, vastly different levels of development among countries across the region, a fragmented marketplace, limited government funding for healthcare, multiple regulatory regimes and standards, different reimbursement models for private partnership, skill shortages and rapidly changing training needs for care workers, and the risks of growing protectionism and economic volatility are some of the challenges faced. These have resulted in severe

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4 For the list of countries in Asia-Pacific, please refer to https://data.unescap.org/dataviz/methodology/list-of-countries-in-the-asia-pacific-region-and-subregions.html (last accessed on 6 June 2022)

5 Asia-Pacific Countries | Asia-Pacific Countries (worldpopulationreview.com) (last accessed on 9 December 2021)

6 IMF, 'Regional Economic Outlook – Asia and the Pacific (2021) (https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/SEQ/SAQ) (last accessed on 19 January 2022)

disparities among LDCs, developing and developed countries in Asia-Pacific in terms of achieving SGDs 3 and 17.

Figure I: Universal Health Coverage Service Index 2000 vs. 2017

	2000	2017
India	31.0	55.0
Cambodia	24.0	60.0
Nepal	24.0	60.0
Singapore	63.0	86.0
Japan	67.0	83.0

Figure II: Per Capita Healthcare Expenditure in 2017 in USD

	Per Capita
India	$253.3
Thailand	$670.9
Myanmar	$287.6
Singapore	$4270.0
Japan	$4563.5

Note: The Universal Health Coverage Service Index is defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, new-born and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population. The indicator is an index reported on a unitless scale of 0 to 100. For more details, refer to https://www.who.int/data/gho/indicator-metadata-registry/imr-details/4834 (last accessed 6 June 2022)

Source: Compiled from SDG Country Profiles (unstatshub.org) and Organisation for Economic Co-operation and Development (OECD), 2020a) (last accessed 8 December 2021)

For example, the universal health coverage (UHC) service index varies widely across the countries (see Figure I). Another example is in terms of healthcare expenditure per capita, which is low in the case of LDCs and developing countries in the region (Figure II). There is also wide variation in healthcare spending by the public and private sector across countries (Figure III).

Figure III: Per Capita Healthcare Spending across Asia-Pacific Countries in 2019

	Public	Private
India	$70	$186
Indonesia	$168	$168
Türkiye	$987	$280
New Zealand*	$3355	$843.3
United States of America (the)	$9053	$1894

Note: Data for New Zealand is for 2018, Figures are in US Dollar.

Source: Extracted from https://www.statista.com/statistics/283221/per-capita-health-expenditure-by-country/ (last accessed on 6 December 2021)

It is now recognised that SDG 3 will not be achieved through public sector service delivery alone. While the private sector has evolved to become a critical provider of essential, high-quality, well-managed, innovative and expertise driven health care services, its reach, particularly in LDCs and middle-income countries where the demand for healthcare services is the highest, is rather limited. Governments will need to encourage more industry participation and public-private partnerships (PPP), and private sector investment to address their economic, systemic and geographic challenges. This also resonates with the World Health Organization's (WHO, 2020) strategy paper on engaging the private sector more in healthcare provision.

While regulation and policy maturity are enablers for private sector engagements, there are clear linkages between more private engagement and macro-economic and institutional variables (Asian Development Bank (ADB), 2018). Macroeconomic stability, with Ease of Doing Business (EoDB) and supportive institutional frameworks result in good investments.

At the same time, the need for private sector engagement may vary by country. For example, countries with abundant public funds, like Brunei Darussalam and Singapore may need less private investment than countries like India, Viet Nam, the Philippines and Malaysia, where public sector spending is unable to meet the healthcare needs of the population. In Singapore, the healthcare infrastructure is almost wholly owned by the state, with limited private sector participation through minor health insurance offerings. While government spending accounts for a predominant share of per capita expenditure on health in most countries in the Asia-Pacific region, and the contribution of the private sector is low, the pandemic and the consequent strain on government budgets have created the

> *The public health system in India remains constrained - due to inadequate funding, inability to attract and retain qualified health professionals, infrastructure gaps and weak management capacity*
>
> *- National Institution for Transforming India (NITI Aayog), Guidelines for Public-Private Partnership for Non-communicable* Diseases".

need for private sector interventions through investments, collaborations and partnerships. Even in countries like Singapore, there can be greater private participation in research and development (R&D) and innovation.

Healthcare falls within the ambit of provincial/state governments in some countries like India. Since central/federal, state/provincial and local governments have a stake in healthcare sector, the partnership with the private sector has to be at all levels within a country.

Trade, cross-border investment and cooperation have historically been a powerful driver to help countries address issues like growth and poverty alleviation and insufficient and unequal access to essential health products and services. Commitments under trade agreements help to secure the free flow of goods, investments and services, and collaboration and cooperation can help address issues related to unequal access to healthcare (ADB), 2019). The COVID-19 crisis has highlighted the need for greater trade, investment and cooperation in the Asia-Pacific region, as countries seek to recover from the pandemic and build back better. The pandemic led to shortages of key medicines and medical devices in many countries; over 90 percent of countries faced sudden disruptions in supply chains, and there has been growing trade protectionism. Along with this, there has been an acute shortage of healthcare workers in many countries. Lack of data on infections and deaths, gaps in health coverage, and access to vaccines made it difficult for countries in the region to address the pandemic more efficiently. The pandemic also highlighted the need for more private investments not only in delivery of core services like hospitals, clinics, laboratories, education for medical professionals, etc., but also in areas like research for drugs and vaccines, vaccine administration training, ancillary services like insurance and ambulance services, and healthcare support in areas like distribution, data collection, collation and analytics. The need to use technology to identify the spread of the disease, and to collect and collate data on the infected and vaccinated have resulted in many collaborations between technology firms and the healthcare sector. Cross-sector linkages have also strengthened during the pandemic. For example, the Indian apparel sector has been one of the largest providers of personal protective equipment (PPE) kits for the global healthcare sector.

1.1 Objective

In the above context, this paper analyses the coverage of the health sector (including products and services) in existing regional and bilateral trade agreements, frameworks, forums and other arrangements in the Asia-Pacific region and its sub-regions. This paper aims to understand, within these agreements and platforms, the coverage of health sector under existing provisions, chapters, commitments, and frameworks; and the current status of regional and bilateral cooperation in the health sector in the Asia-Pacific region. It will identify the arrangements and other mechanisms that facilitate trade and cooperation in the health sector.

The paper examines private sector initiatives that provide scope to enhance trade, investment and cooperation in the health sector. It identifies gaps and best practices and discusses policy recommendations for Asia-Pacific member countries to leverage existing trade and other arrangements among governments and the private sector to enhance regional trade, investment and cooperation in the health sector.

1.2 Methodology

The study is based on secondary data and information analysis and 25 key informant interviews (KIIs). The KIIs cover the private sector (companies in the healthcare sector and those in allied sectors like technology), non-government organisations (NGOs)/foundations, and international organisations such as the WHO, health sector academic experts and policy makers in the region.

The study covers SDG 3 (good health and well-being) and SDG 17 (partnerships for the goals). The coverage of health sector products and services are given below.

1.2.1 Coverage of Health Products for Trade in Goods

There are two main systems in use for international trade statistics in goods, the Harmonised System (HS) and the Standard International Trade Classification (SITC).[7] In this study, health products have been identified by HS product classification for the analysis of trade in health sector products as it is extensively used by governments for

[7] https://unstats.un.org/unsd/tradekb/Knowledgebase/50097/Trade-Statistics-Coding-Systems (last accessed on 8 December 2021)

trade policies and trade agreements.[8] Since the HS classification system is more comprehensive than the SITC system maintained by the United Nations,[9] a list of health sector products have been identified by their HS codes and these codes have been matched with SITC codes (for more details, refer to Appendix A, Table A1 and A2). The relevant HS codes and their product descriptions for this study have been compiled from three sources: (1) the World Integrated Trade Solution (WITS) database (2) World Trade Organisation (WTO, 2012) and (3) Trade, European Commission (2020).

1.2.2 Coverage of Health Services for Trade and Modes of Supply in Services

The coverage of health services under trade in services agreements in the Asia-Pacific varies. In the case of modern medical practices, health services mainly cover medical and dental services, services provided by midwives, nurses, physiotherapists and paramedical personnel, health related services such as hospital services, and veterinary services. Internationally, the United Nations Central Product Classification (UNCPC) is the most common classification for recording trade in services and for trade negotiations. The classification of health services in the UNCPC has not changed over time (see Table A3 in Appendix A), and a majority of trade agreements use this classification. In some trade agreements, traditional medical practices and therapeutic treatments[10] have been covered.

Health services can be supplied through four modes as given in Figure IV. Technological progress, and in particular advances in the area of information technology, have vastly increased the scope for remotely supplying services that were previously not tradable across borders.

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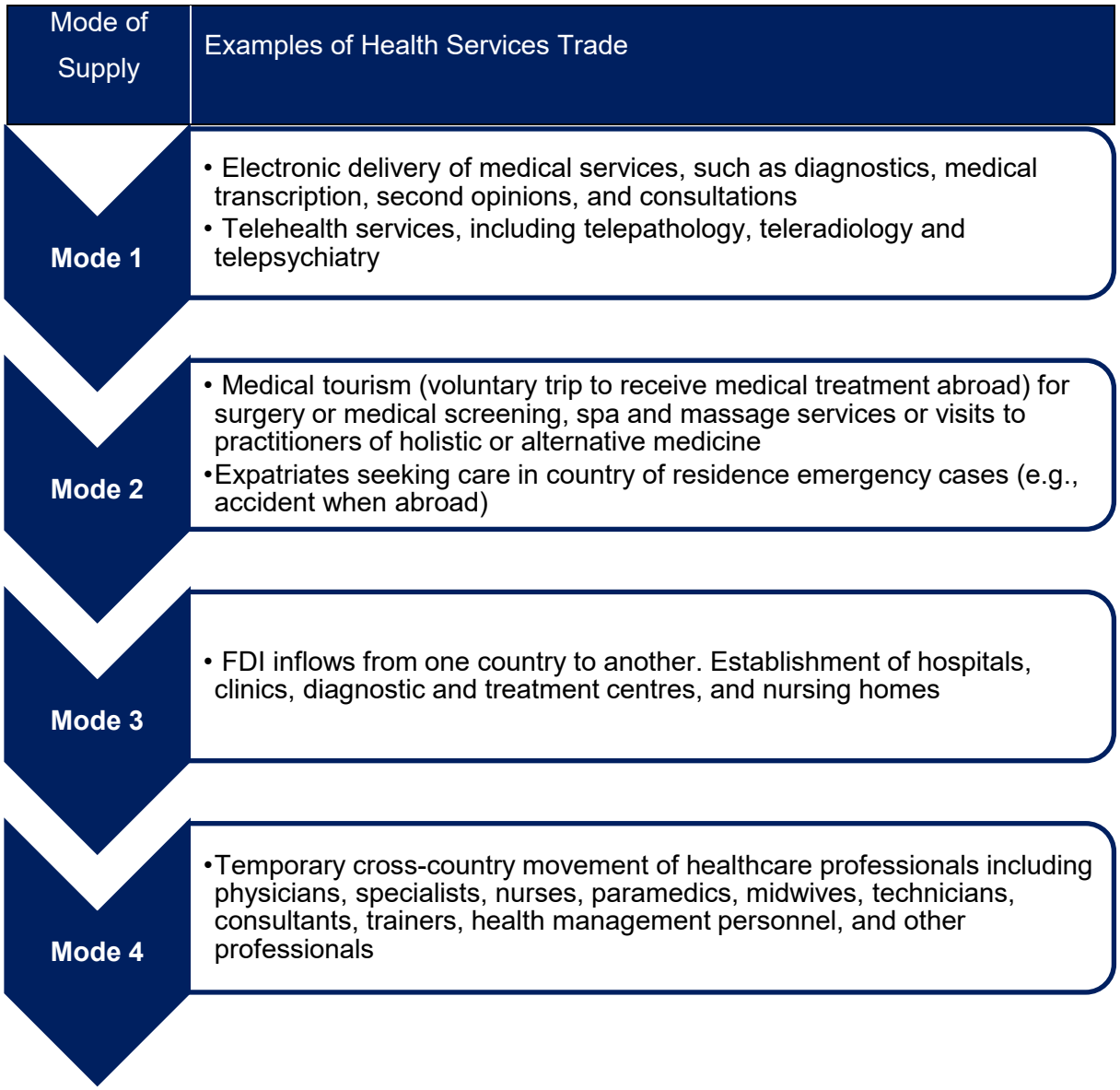
[8] The Harmonised System is an international nomenclature for the classification of products developed by the World Customs Organization (WCO). It allows participating countries to classify traded goods on a common basis for customs purposes. https://unstats.un.org/unsd/tradekb/Knowledgebase/50018/Harmonised-Commodity-Description-and-Coding-Systems-HS (last accessed on 8 December 2021)

[9] https://wits.worldbank.org/wits/wits/witshelp/Content/Basics/A5.Available_Nomenclatures.htm (last accessed on 8 December 2021)

[10] For example, the Japan-Thailand Economic Partnership Agreement covers movement of Thai spa therapists. The text of the agreement is available at Ministry of External Affairs, Japan, https://www.mofa.go.jp/policy/economy/ fta/thailand.html. India is now asking its trading partners to undertake commitments for ayurveda doctors, yoga practitioners and ayurveda *sevikas* (care workers).

Figure IV: Coverage of Health Services by Different Modes of Supply



Source: Compiled from WHO (2015)

Note: Mode 1 defines the cross-border supply of services from the territory of one country into the territory of the other country; Mode 2 defines the consumption of services abroad (consumer of one territory of one country consume services in the territory of other country); Mode 3 defines the commercial presence of a company from one country in another; and Mode 4 defines the presence of "natural persons" for a limited period of time in another country.

1.3 Structure of the Report

The paper is divided into seven sections. Section 2 presents a brief overview of recent trends and developments in goods and services trade in the region, and in investment flows.

Section 3 presents an analysis of bilateral and regional trade agreements in terms of the coverage and depth of commitments in the healthcare sector, focusing on goods, services, investment, regulatory compliance and cooperation, recognition of standards for products and services, provision for government procurement of healthcare products and services, intellectual property rights protection, etc. It highlights the similarities and differences in different agreements signed by the same countries, analysing the depth of coverage and the extent of commitments across these agreements – comparing and identifying their strengths. It also presents the coverage of traditional medicine and preventive healthcare in trade agreements.

Section 4 presents collaborations and initiatives across various multilateral and regional organisations, initiatives taken by private entities, government-to-government collaborations, public-private partnerships; mutual recognition agreements, and memorandums of understanding among different stakeholders across countries. It also discusses social innovation, contribution/collaboration of NGOs and grant organisations to the healthcare sector across countries, and technology and data sharing, which is a core component of healthcare collaboration.

Section 5 presents the impact of the COVID-19 outbreak and the measures taken by international and regional organisations and governments to tackle the pandemic. It also evaluates trade agreements and collaborations signed during the pandemic in terms of the depth of their coverage and commitments.

In Section 6, barriers to trade, investment and collaboration in the healthcare sector have been discussed. The section covers gaps in trade agreements, domestic regulations and processes, and issues in collaborations between the public and private sector.

Finally, Section 7 presents recommendations to improve existing arrangements and other opportunities to increase regional cooperation, investment and trade in health products and services.


Section 2

2. Asia-Pacific Healthcare Market and Trade in Goods, Services and Cross-Border Investment in Health Sector

By 2030, 60 percent of the population will be living in Asia and one in four will be over the age of 60 years.[11] With rising healthcare costs, increasing life expectancy, increasing incidence of chronic and non-communicable diseases, this region will be an important healthcare market and will play a key role in health sector trade, investment, and cooperation. Although there is no overall estimate, some research studies estimated the global healthcare market in 2016 at $540[12] billion and projected that it would grow at a compound annual growth rate (CAGR) of 10 percent in developing countries.[13] Based on industry estimates and KIIs, the overall healthcare sector is expected to grow between 7 percent and 12 percent in the six-year period from 2021 to 2027 in the Asia-Pacific region. Budgetary allocations by governments are also expected to double during the period.[14]

2.1 Trade in Health Products

In Asia-Pacific, there has been increasing trade in health products; growth accelerated during the pandemic. This is similar to the global trend; the WTO estimates that global exports of medical products rose from $957.7 billion in 2018 to $1159.7 billion in 2020.

Export of select health product HS Codes (see Appendix B, Table B1) increased from $674 billion in 2018 to $768.65 billion in 2020 at a CAGR of 4.48 percent in the Asia-Pacific region.

2.1.1 Top Countries

Ten countries account for over 94 percent of total exports originating from the Asia-Pacific region since 2018. China was the top exporter of health products in 2020, with

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11 https://apacmed.org/the-medtech-industry/medtech-industry-in-apac/ (last accessed on 9 December 2021)

12 $ refers to the US dollar unless otherwise specified.

13 https://www.goldsteinresearch.com/report/asia-pacific-apac-healthcare-sector-outlook-opportunity-and-demand-analysis-market-forecast-2016-2024#:~:text=Asia%20Pacific%20%28APAC%29%20Healthcare%20Sector%20Outlook%20Strong%20economic,areas%20are%20still%20facing%20accessibility%20and%20affordability%20issues (last accessed March 3, 2022)

14 For example, China's healthcare market is expected to grow from $0.95 trillion (RMB6 trillion) in 2019 to $2.53 trillion (RMB16 trillion) in 2030.[14] The Indian healthcare sector was worth $160 billion in 2017 and is expected to grow to $372 billion by 2022. See: https://www.statista.com/statistics/701556/healthcare-sector-size-india/ (last accessed on 9 December 2021)

a share of almost 50 percent in the total exports of the region (see Table 2.1). China's exports increased at a CAGR of 10.43 percent from $284 billion in 2018 to $382.55 billion in 2020, followed by Japan and the Republic of Korea in the second and third place respectively. The shares of these two countries decreased between 2018 and 2020 (see Table 1).

Table 1: Top Countries in Asia-Pacific and their Share in Health Trade in 2020 vs. 2018

Trade Share in Percent

	2020		2018	
Rank	Reporter Name	Trade Share	Reporter Name	Trade Share
1	China	49.77	China	42.14
2	Japan	9.91	Japan	12.29
3	Republic of Korea	7.48	Republic of Korea	9.92
4	India	6.62	Singapore	7.64
5	Singapore	6.33	India	6.99
6	Malaysia	4.07	Malaysia	3.94
7	Hong Kong, China	3.43	Hong Kong, China	3.81
8	Viet Nam	3.13	Viet Nam	3.13
9	Thailand	2.45	Thailand	3.06
10	Türkiye	1.80	Türkiye	1.56
	Top 10 Total Share	**94.99**	**Top 10 Total Share**	**94.49**

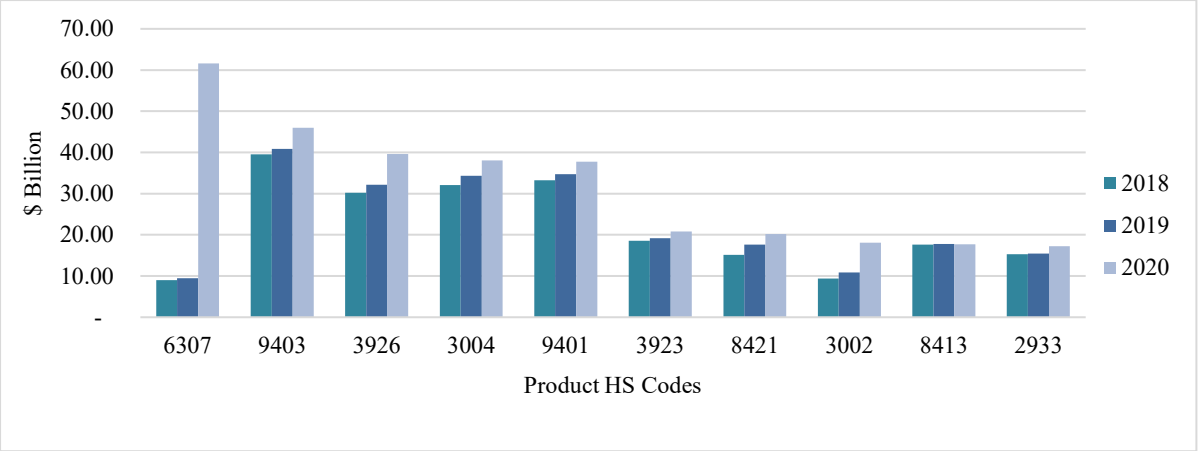
Source: Compiled from UNComtrade Data. Available at https://comtrade.un.org/data/ (last accessed May 02, 2022)

2.1.2 Top Products

From 2018 to 2020, the most exported product by Asia-Pacific countries were optical, medical or surgical instruments and apparatus (HS code 90) although exports of these declined from $211.8 billion in 2018 to $208.87 billion in 2020. With the spread of COVID-19, the items that ranked second in terms of export value was other made-up articles, including dress patterns n.e.s. (HS code 6307), which includes items such as face masks (HS code 630790) (WTO, 2021). Exports for this product category grew at a CAGR of 90 percent from $8.98 billion (2018) to $61.61 billion (2020) (see Figure

V). The other top health products exported over the last three years (2018 to 2020) are shown in Figure V.

Figure V: Top Health Products Exported (2018-2020)



Note: 6307: Other made up articles, including dress patterns; 9403: Other furniture and parts thereof; 3926: Other articles of plastics and articles of other materials of headings 39.01 to 39.14; 3004: Medicaments (excluding goods of heading 30.02, 30.05 or 30.06) consisting of mixed or unmixed products for therapeutic or prophylactic uses, put up in measured doses (including those in the form of transdermal administration systems) or in forms or packing; 9401: Seats (other than those of heading 94.02), whether or not convertible into beds, and parts thereof; 3923: Articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics; 8421: Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases; 3002: Human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; antisera, other blood fractions and immunological products, whether or not modified or obtained by means of biotechnological processes; vaccines, toxins, cultures of micr.; 8413: Pumps for liquids, whether or not fitted with a measuring device; liquid elevators; 2933: Heterocyclic compounds with nitrogen heteroatom(s) only.

Source: Compiled and Extracted from WITs Database. Available at World Integrated Trade Solution (WITS) | Data on Export, Import, Tariff, NTM (worldbank.org)

2.2 Trade in Health Services

In 2017, health services accounted for only 0.4 percent in global services trade (WTO, 2019a).[15] However, trade in health services is rising rapidly. Since 2005, trade in health services recorded an annual growth rate of 10 percent. In the Asia-Pacific region, Singapore, India, China, the Republic of Korea, and the Philippines are among the largest trading countries in the world.[16] In 2017, Singapore was the largest exporter of health services in Mode 1 and Mode 4 whereas Thailand and China were the largest exporters

[15] For example, distribution services had a share of 19.9 percent, financial services 18.6 percent, tourism services 7.8 percent and education services 0.8 percent, in the 2017 global services trade. For more details refer https://www.wto.org/english/res_e/booksp_e/00_wtr19_e.pdf (last accessed on January 24, 2022)

[16] See the database of the WTO on 'Trade in Services Data by Mode of Supply (TISMOS)'https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm (last accessed on January 24, 2022)

in Mode 2 and Mode 3 (see Table 2). In the same year, India was the second largest exporter of health services under the three modes – Mode 1, Mode 2 and Mode 4.

Table 2: Global Exports of Top Exporters of Health Services (Mode-Wise) in the Asia-Pacific in 2017

Value in $ Million

Mode 1		Mode 2		Mode 3		Mode 4	
Country	Value	Country	Value	Country	Value	Country	Value
Singapore	216	Thailand	444	China	2217	Singapore	72
India	60	India	232	Republic of Korea	132	India	20
Philippines	46	Malaysia	215	Australia	125	Philippines	15
Australia	36	Republic of Korea	199	Japan	50	Australia	12
New Zealand	33	China	142	Singapore	26	New Zealand	11
China	12	Singapore	133	New Zealand	4	China	4
Republic of Korea	12	Viet Nam	72	India	0.2	Republic of Korea	4
Thailand	8	The Philippines	68	The Philippines	0.05	Thailand	2.6
Japan	7	Bangladesh	16	Thailand	0.04	Japan	2.3
Malaysia	6	Indonesia	14	Malaysia	0.03	Malaysia	1.9
Indonesia	5	Nepal	7.6	Indonesia	0.01	Indonesia	1.6
Viet Nam	4	New Zealand	5.3	Pakistan	0.003	Viet Nam	1.4
Pakistan	0.8	Pakistan	0.6	Viet Nam	0.001	Pakistan	0.3
Cambodia	0.1	Afghanistan	0.12	Cambodia	0.001	Cambodia	0.04

Source: Compiled from TISMOS Database, WTO, available at https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm (last accessed on January 24, 2022)

In the past, Asia-Pacific countries such as India, Indonesia, Myanmar, the Philippines and Viet Nam were among the largest exporters of health professionals to other regions such as the Middle East, Europe, the US and Canada, and within the Asia-Pacific region, to Japan, Australia and New Zealand (Yue, at. al, 2019). According to

the OECD,[17] as of 2017, around 69,000 Indian-trained doctors migrated to the US, the UK, Canada, and Australia, which is equivalent to 6.6 percent of the number of doctors registered with the Medical Council of India (MCI).[18] India has also become a leading source, after the Philippines, for nurses in the world (accounting for roughly 25 percent of all overseas nurses in the world).[19] Nearly 56,000 Indian-trained nurses work in the US, the UK, Canada and Australia – about 3 percent of registered nurses in India.[20] More recently during the COVID-19 pandemic, several countries have created special entry avenues with special entry visas and extended visa validities for health workers to mitigate domestic shortages and facilitate entry of medical professionals (WTO, 2020c). For example, the UK granted the fast-tracked visa for medical professionals in November 2019.[21] In Japan, a trainee visa programme was launched in 2019 to address labour shortages, with up to 60 000 nursing care workers expected to take up temporary jobs (WTO, 2019b).

2.3 Cross-border Investment in Healthcare

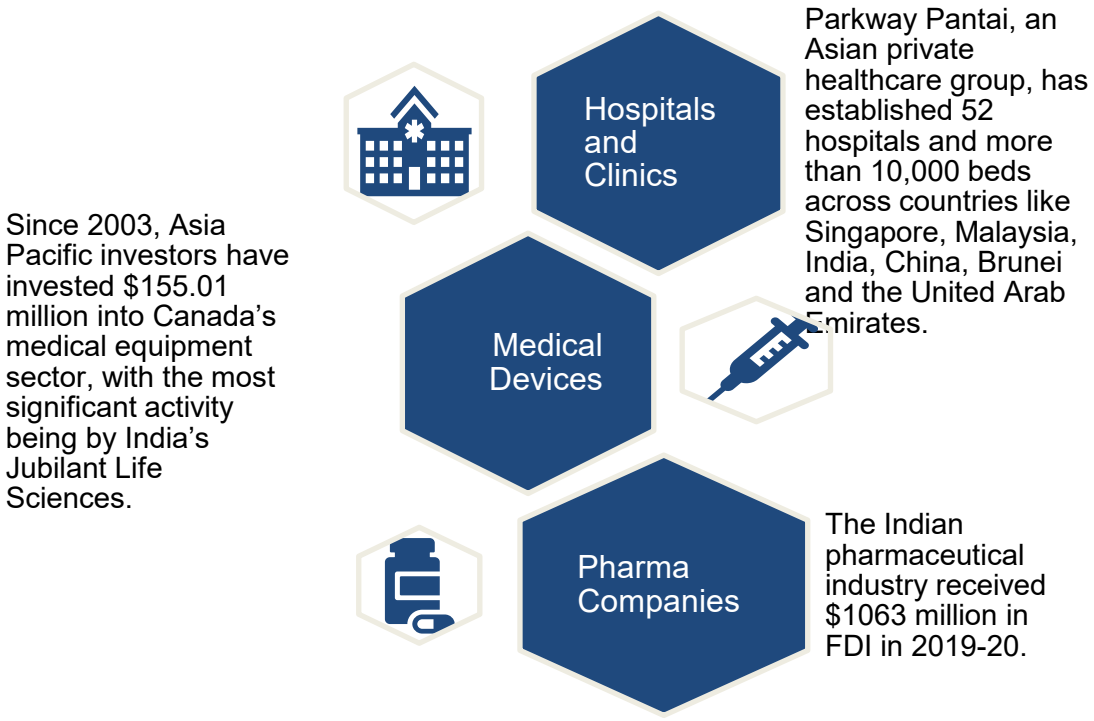
Shortage of government funds to develop the sector as required has induced companies from developed countries and other developing countries to invest in the healthcare sector. These cross-border investments have been in the form of infrastructure, like hospital buildings and clinics, in manufacturing medical devices, and in pharmaceutical companies (see Figure VI) in the developing and least developed countries of the region. In addition, there is cross-industry investment in the health sector with, for instance, technology companies investing in healthcare and tourism companies investing in medical tourism. The health sector in developing Asia attracted $3693 million worth of FDI in greenfield projects and project financing in 2019; this declined to $2464 million in the pandemic year 2020. While FDI into few countries like China and India increased in the year 2020, other countries experienced a decline in FDI inflows, largely due to the COVID-19 pandemic. For example,

[17] https://stats.oecd.org/Index.aspx?DataSetCode=HEALTH_WFMI (last accessed on 24 January 2022)
[18] https://www.migrationpolicy.org/article/global-demand-medical-professionals-drives-indians-abroad (last accessed on 24 January 2022)
[19] https://www.globaltrademag.com/developed-countries-are-the-largest-importers-of-healthcare-professionals/ (last accessed on 24 January 2022)
[20] https://www.migrationpolicy.org/article/global-demand-medical-professionals-drives-indians-abroad (last accessed on 24 January 2022)
[21] https://www.migrationpolicy.org/article/global-demand-medical-professionals-drives-indians-abroad (last accessed on January 2022)

Singapore's inflows declined by 20.7 percent, while FDI inflows to Uzbekistan fell by 26 percent (UNCTAD, 2021). The inflows have been more in sectors like technology than healthcare.

The pattern of investment has changed. For example, technology companies are more willing to partner and invest in health care technology in other countries. There has also been a rise in venture-capital (VC) activity in healthcare in Asia-Pacific. Almost two-thirds of the approximately 1000 VC backed deals have been in mainland China since 2020. By value, China accounted for 89 percent of the deals ($18 billion). The remaining deals were mainly in Japan, the Republic of Korea and India.[22]

Figure VI: Types of Cross-Border Investment in Healthcare



Source: Compiled from various sources. Available at https://www.asiapacific.ca/publication/fdi-flows-between-canada-and-asia-pacific-health-care; https://unctad.org/system/files/official-document/wir2021_en.pdf; https://www.gleneaglesglobalhospitals.com/about-parkway-pantai (last accessed on January 24, 2022)

Note: Exchange rate CAD1 = US$0.79 as on January 25, 2022.

[22] https://www.preqin.com/insights/research/blogs/venture-capital-healthcare-deals-in-asia-pacific-boom-in-h1-2021 (last accessed on 21 January 2022)

Section 3

3. Bilateral and Regional Trade Agreements in Asia-Pacific

This section presents the coverage and depth of commitments in bilateral and regional trade agreements in the healthcare sector focusing on goods, services, investment, recognition of standards for products and services, provision for government procurement of healthcare products and services, intellectual property rights protection under the trade agreements, etc.

The Asia-Pacific region has 53 member countries and 9 associate member countries located in five major sub-regions – East and North-East Asia (ENEA),[23] North Central Asia (NCA),[24] the Pacific,[25] South-East Asia (SEA),[26] and South and South-West Asia (SSWA)[27] (UNESCAP, 2019). Many countries in this region are members of the WTO and have taken commitments in areas like trade in goods, trade in services and Trade-Related Aspects of Intellectual Property Rights (TRIPS), etc., which have helped facilitate trade in healthcare products and services. In addition, some countries are signatory to plurilateral agreements such as the 1994 Agreement on Trade in Pharmaceutical Products (also known as the Pharmaceutical Agreement, see Appendix C), to which a limited number of developed countries in the region are party to, and the Agreement on Government Procurement. They also abide by other WTO agreements such as the Technical Barriers to Trade (TBT) Agreement, or the Sanitary and Phytosanitary Measures (SPS) Agreement.

Most Asia-Pacific countries are members of some groups, such as the G20, Asia-Pacific Economic Cooperation (APEC), and Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and regional groups like ASEAN; however, a few countries such as Azerbaijan, the Islamic Republic of Iran, and Uzbekistan are not party to any of the engagements. Table D1, in Appendix D, summaries the participation of UNESCAP member countries in these regional groups.

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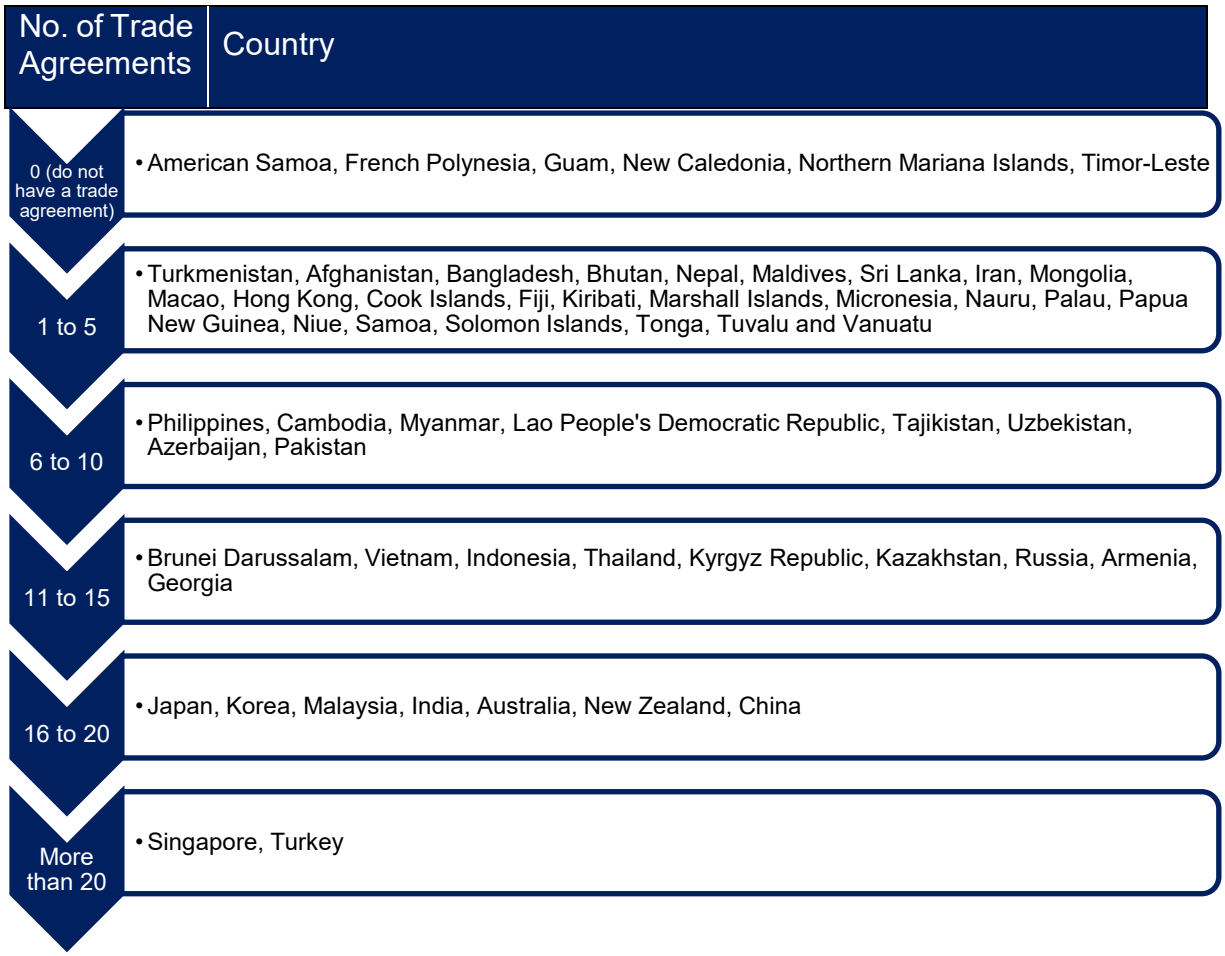
[23] China, Japan, Mongolia, RoK, Hong Kong, and Macao
[24] Kazakhstan, Russian Federation, Armenia, Azerbaijan, Georgia, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
[25] Australia, New Zealand, Fiji, Kiribati, Marshall Islands (the), Micronesia (Federated States of), Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, American Samoa, Cook Islands, French Polynesia, Guam, New Caledonia, Niue, Northern Mariana Islands
[26] Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei Darussalam, Cambodia, Myanmar, Timor-Leste, Vietnam
[27] Afghanistan, India, Turkey, Bangladesh, Bhutan, Iran (Islamic Republic of), Maldives, Nepal, Pakistan, Sri Lanka

Among the associate members[28] of UNESCAP, only Hong Kong, China and Macao are WTO members.

This region accounts for 48 percent of total regional trade agreements (RTAs)/free trade agreements (FTAs) in the world.[29] The number of trade agreements that countries are engaged in vary (see Figure VII). Some countries such as American Samoa, French Polynesia, Guam and Timor-Leste do not have trade agreements while others like Singapore have more than 20 trade agreements. Overall, the engagement of some LDCs and developing countries in trade agreements is much lower than that of developed countries.

Figure VII: Number of Free Trade Agreements by Countries: Asia-Pacific region



[28] American Samoa, Cook Islands, French Polynesia, Guam, Hong Kong, China, Macao, China, New Caledonia, Niue, and Northern Mariana Islands

[29] Compiled from WTO RTA Database, available at https://rtais.wto.org/UI/PublicAllRTAList.aspx (last accessed on 2 December 2021)

Source: Compiled from different sources.

3.1 Trade Agreements of Asia-Pacific: Coverage of Goods and Services

Trade agreements have varying levels of coverage of goods and services. While some trade agreements cover only trade in goods, some cover only trade in services (EU-Armenia FTA); some cover goods, services and investment (South Asian Association for Regional Cooperation (SAARC)); while some are comprehensive new-age trade agreements (such as the Australia-New Zealand Closer Economic Relations Trade Agreement, India-Japan Comprehensive Economic Partnership Agreement (CEPA), etc.), covering trade in goods, trade in services, investment, intellectual property rights (IPR), government procurement, trade facilitation, etc. The agreements with developed countries, like the US and the European Union (EU), often seek to secure regulatory commitments apart from market access (Hoekman, 2018). By region, there are some regional agreements and cooperation initiatives (like among ASEAN) among the member countries, which are more comprehensive than the others (for example, SAARC).

There are some agreements between countries of sub-regions (such as the Regional Comprehensive Economic Partnership (RCEP)), countries/regions outside the Asia-Pacific (such as the European Union (EU)-Georgia Deep and Comprehensive FTA and the Philippines-European Free Trade Association (EFTA) FTA). Agreements are between developed countries, between developed and developing countries and between developing countries and LDCs (south south). For the purposes of this study, a mix of North-South, South-South and triangular agreements have been considered.

The RCEP Agreement between 15 countries, including ten ASEAN countries[30] and Australia, New Zealand, China, Japan and the Republic of Korea, is Asia's largest trade agreement.[31] The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) is another comprehensive mega agreement, which covers a

[30] Brunei Darussalam, Myanmar, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, the Philippines, Singapore, Viet Nam and Thailand.

[31] RCEP was signed in November 15, 2020 and entered into force on January 1, 2022 for ten countries including Australia, Brunei Darussalam, Cambodia, China, Japan, Lao PDR, New Zealand, Singapore, Thailand and Vietnam. In RoK the agreement will be in force in February 2022. The remaining four ASEAN countries – Indonesia, Malaysia, Philippines, Myanmar – have not yet ratified RCEP. These ASEAN countries are in the process of amending their laws such as their patents acts, copyright and trademarks act, etc., to ratify the agreement. https://theaseanpost.com/article/rcep-vital-philippines (last accessed on 13 January 2022)

number of countries in the Asia-Pacific region like Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Viet Nam and some outside it. For our analysis, we have presented the similarities and differences in commitments of the same country across different agreements, a comparison across different agreements in terms of their coverage and depth, common exclusions across trade agreements, etc.

Some regional agreements do not cover trade in health products; for example, the Treaty on a Free Trade Area between members of the Commonwealth of Independent States (CISFTA), [32] the Pacific Island Countries Trade Agreement (PICTA)[33] and the Economic Cooperation Organization Trade Agreement (ECOTA).[34] These mostly involve LDCs, who need investment and access to healthcare goods and services.

Asia-Pacific countries have sector-specific provisions in many trade agreements, covering areas such as harmonisation of standards, cooperation or joint capacity building and R&D in the pharmaceuticals and medical devices sectors. For example, the India-Japan CEPA aims to increase cooperation on generic medicines and build mutual confidence in the regulatory measures of the two countries. In the CPTPP, there are annexes on pharmaceuticals and medical devices that cover the preparation, adoption and application of technical regulations, standards, conformity assessment procedures, marketing authorisation and notification procedures for trade. Many of the provisions are however, of a "best endeavour" nature, such as encouraging collaboration to harmonise and align regulations and regulatory activities and encouraging the parties to consider regionally developed scientific or technical guidance that is aligned with international efforts (WTO, 2020b).

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[32] The member countries include Armenia; Belarus, Kazakhstan, Kyrgyz Republic, Moldova, Russian Federation, Tajikistan and Ukraine. The text of the agreement is available at https://aric.adb.org/fta/commonwealth-of-independent-states-free-trade-area (last accessed on 8 January 2022)

[33] The member countries include Solomon Islands, Cook Islands, Fiji, Kiribati, Nauru, Vanuatu, Niue, Federated States of Micronesia, Papua New Guinea, Tonga, Tuvalu and Samoa. The text of the agreement is available at https://wits.worldbank.org/GPTAD/PDF/archive/picta.pdf (last accessed on 8 January 2022)

[34] The member countries include Afghanistan, Azerbaijan, Iran, Kazakhstan, Pakistan, Kazakhstan, Turkey, Turkmenistan, Uzbekistan and Kyrgyz Republic. The text of the agreement is available at https://www.worldtradelaw.net/document.php?id=fta/agreements/ecota.pdf#

3.1.1 A Comparison Between Two Regional Agreements: Association of Southeast Asian Nations and South Asian Association for Regional Cooperation

In this section, we compare two regions, namely the ASEAN[35] and SAARC; in one, there has been progress in integrating the healthcare market within the region, while in the other, there has hardly been any progress.

- **ASEAN**: Healthcare is one of the primary sectors identified for economic integration in ASEAN. Regional integration in the ASEAN is based on two approaches – tariff reduction/liberalisation and conformity in harmonised standards.[36] In order to establish a single market and production base with free flow of goods by 2015, the ASEAN Trade in Goods Agreement (ATIGA) was signed in February 2009 and came into force on 17 May 2010.

  The ATIGA contains comprehensive coverage of commitments related to trade in goods and mechanisms for its implementation as well as institutional arrangements. The period for elimination of tariffs on health products varies. Brunei Darussalam, Malaysia and Singapore eliminated import duties on health products at the entry of the agreement (in 2010), Cambodia and Lao PDR in 2012, Indonesia, Myanmar, the Philippines and Thailand in 2017, and Viet Nam in 2018.

In order to harmonise standards, ASEAN implemented two directives – the ASEAN Common Submission Dossier Template (CSDT) for Medical Devices (formerly known as the ASEAN Medical Device Directive (AMDD), and the ASEAN Common Technical Dossier (ACTD) for Pharmaceuticals. In 2015, AMDD was implemented to harmonise medical device regulations in the ASEAN. Subsequently, the name of the agreement was changed to the ASEAN CSDT.

The main objective of the CSDT is to provide information and spell out the requirements that allow a device manufacturer to provide the same body of product registration documentation to different regulatory authorities of the ASEAN member

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[35] The member countries of the ASEAN are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Myanmar, Malaysia, Philippines, Singapore, Thailand and Vietnam.

[36] ASEAN Directive on Medical Devices; http://agreement.asean.org/media/download/20141204115621.pdf (last accessed on 13 January 2022)

countries. The CSTD classifies medical devices into four classes based on risk level. Class A products are low risk, Class B products are low-moderate risk, Class C products are moderate-high risk, and Class D products are high risk.

The ACTD for Pharmaceuticals for human use, which was implemented in 2015, aimed to serve as a harmonised guideline for pharmaceutical product registrations in ASEAN countries. The ACTD on pharmaceuticals includes four main sections that cover required registration application documents, product information and quality control documents, non-clinical documents, and clinical documents. The dossier also identifies the following categories of drugs: new chemical entities (NCE), biotechnological products (Biotech), major variations products (MaV), minor variations products (MiV), and generics (G). ASEAN member countries are at different stages of implementing these directives.[37] For example, Thailand, Malaysia, Singapore have already implemented these directives in their health regulations.

- **SAARC**: Compared to ASEAN, SAARC is a much less integrated regional group, mainly because of geo-political tensions between India and Pakistan and internal tensions in countries like Afghanistan. This is one of the most populous regions in Asia-Pacific with developing countries and LDCs, where healthcare infrastructure is weak and access to health care is an issue. The Agreement on South Asian Free Trade Area (SAFTA) was signed on 6 January 2004 and came into force on 1 January 2006. It aimed to enhance regional economic integration through the promotion of preferential trade. India, Pakistan and Sri Lanka are categorised as Non-Least Developed Contracting States (NLDCS) and Afghanistan, Bangladesh, Bhutan, Maldives and Nepal are categorised as Least Developed Contracting States under this agreement. All member countries have completed the Trade Liberalization Programme (TLP) under Phase I and II of SAFTA and brought down tariffs to a level between 0 percent and 5 percent on all products other than those in their respective sensitive lists. The core issue in SAFTA is that the sensitive list is large. While there is a need to prune it down and there are discussions on further reduction of the sensitive

[37] https://www.pacificbridgemedical.com/regulation/asean-medical-device-pharmaceutical-regulations/ (last accessed on July 18, 2022)

lists under Phase III of SAFTA, the discussions are still ongoing. Afghanistan, Bhutan, and Nepal have given a commitment to eliminate tariffs on health products whereas Bangladesh, Maldives, Pakistan, and Sri Lanka have included select health products under the sensitive list.[38] Unlike ASEAN, there is hardly any progress on regulatory harmonisation under SAARC.

3.2 Trade Agreements in Goods: Analysis

This section focuses on how tariff and non-tariff issues like standards are addressed through trade agreements. Studies show that both tariffs and non-tariff measures (NTMs) restrict access to health products. Tariffs simply transfer income from consumers to local producers and the government, with an additional cost in economic efficiency, whereas NTMs like stringent standards for medicines and other health products may completely restrict trade in health products even if tariffs are zero (Helble and Shepherd, 2017).

3.2.1 An Analysis of Tariffs under Trade Agreements

In Asia-Pacific, while many countries have reduced autonomous tariffs for health products, tariffs are high in some countries. Some Asia-Pacific countries such as Bangladesh (43.3 percent), India (40.5 percent), Maldives (32.9 percent), Nepal (21.4 percent), Pakistan (61 percent) and Thailand (24.7 percent) have high average bound duty on all medical products (WTO ITC UNCTAD, 2020).

Along with basic customs duty (BCD), some countries like India have imposed a number of cesses in recent years, increasing overall import costs. There are three issues in autonomous duties and cesses. First, they can be high. Second, it is often not clear if the cess is imposed only on imports, whether they take away the benefits of tariff reduction and whether these can be discussed under trade agreements. Third, cesses can lead to an inverted duty structure, where raw materials attract a higher duty than finished products. In such cases, it prevents LDCs and developing countries from becoming manufacturers of pharmaceutical products and medical

[38] https://commerce.gov.in/wp-content/uploads/2020/05/safta.pdf ; http://www.doc.gov.lk/index.php?option=com_content&view=category&id=15&Itemid=183&lang=en (last accessed on 27 January 2022)

devices. An example from India is given below in Box 1. Lower or no trade tariffs can lead to lower treatment costs in developing countries.

In the case of the pharmaceutical sector, studies show that developed countries have undertaken the maximum tariff liberalisation, followed by developing countries. LDCs have the lowest levels of tariff liberalisation. Further, South Asian countries like Nepal, Pakistan and India have the three highest average tariff rates in the world (Banik and Stevens, 2020).

- ***Inverted Duties***: The purpose of trade agreements is not only to reduce tariffs but also to reduce inverted duties and other anomalies. A study by Dang and Sharma (2019) pointed out that the reason why more than 75 percent of India's demand for medical devices is met through imports is the higher import duty on raw materials/intermediate products rather than on the finished product. It was pointed out during industry interactions that trade agreements in the Asia-Pacific region have resulted in inverted duties. In India, higher taxes on imported components (see Box 1) increase the costs of manufacturing. Even incorrect domestic taxes can lead to inverted duties. For example, in India the Integrated Goods and Services Tax (IGST) rate for finished products is 12 percent, while for certain inputs like bulk drugs and packing material, it is 18 percent. Inverted duties in trade agreements are difficult to identify and analyse unless a value chain approach, by product categories, is followed.

Box 1: Autonomous Duties and Cess and its Impact: An Example of India

India is one of the largest importers of pharmaceutical products in the world. Since 2009, the BCD in pharmaceutical products and medical devices has remained at 10 percent and 7.5 percent, respectively. However, India imposes a countervailing duty (CVD), special additional duty (SAD) and other cesses. For example, in February 2020, the Indian government introduced a health cess at the rate of 5 percent on all medical devices/instruments under the headings 9018 to 9022. This cess is not applicable on medical devices/instruments that are exempt from BCD in the 2020-2021 Union Budget.

Figure VIII: A List of Products where Health Cess is Applicable at 5 Percent

Medical, surgical, dental or veterinary sciences, including scientigraphic apparatus, other electro medical apparatus and sight-testing instruments (HS code 9018)

Mechano-therapy appliances; massage apparatus; psychological aptitude-testing apparatus; ozone therapy, oxygen therapy, aerosol therapy, artificial respiration or other therapeutic respiration apparatus (HS 9019).

Breathing appliances and gas masks (excluding protective masks having neither mechanical parts nor replaceable filters, and artificial respiration or other therapeutic respiration and apparatus (HS code 9020).

Orthopaedic Appliances, Including Crutches, Surgical Belts and Trusses; Splints and Other Fracture Appliances; Artificial Parts of The Body; Hearing Aids And Other Appliances Which Are Worn Or Carried, Or Implanted In The Body, To Compensate for a Defect or disability (HS code 9021).

Apparatus based on the use of x-rays or of alpha, beta or gamma radiations, whether or not for medical, surgical, dental or veterinary uses, including radiography or radio-therapy apparatus, x-ray tubes and other x-ray generators, high tension generators, control panels and desks, screens, examination or treatment tables, chairs and like (HS code 9022).

Source: Compiled from Goyal (2021)

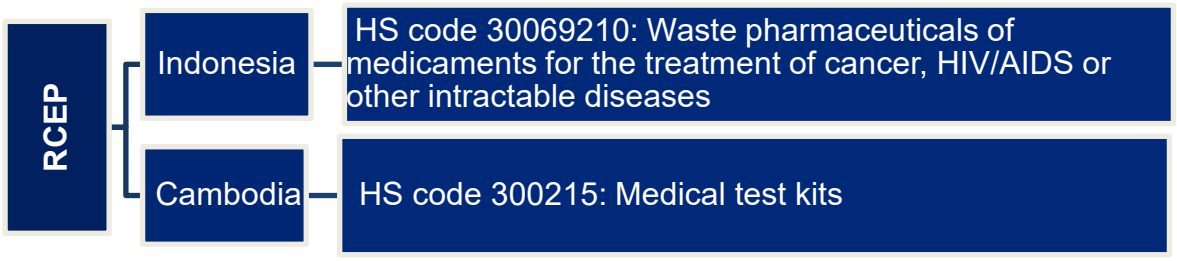
In medical devices, CVD and special CVD had increased from 4.12 percent in 2009-10 to 6 percent in 2015-16. In 2021-22, IGST of 12 percent and a Social Welfare Surcharge (SWS) of 10 percent was made applicable on all medical device products.

Source: Compiled from Various Sources and Industry Interactions.

3.2.2 An Analysis of Tariffs under Trade Agreements: Exclusion List

Trade agreements in Asia-Pacific differ by the size of their exclusion lists, by the period for tariff phase out periods, and by the extent of regulatory commitments, etc. In their trade agreements, few Asia-Pacific countries have not covered some health products in their tariff schedule (see Figure IX). For example, in the India-Japan CEPA, India has not covered certain health products in its tariff schedule (see Figure X). These are also products excluded by Brunei, Cambodia, Myanmar, Indonesia and Thailand in their tariff schedules in the ASEAN-Japan CEPA.

Figure IX: Examples of HealthCare Products not Liberalised in Regional Comprehensive Economic Partnership



Trade agreements like the India-Japan CEPA and the ASEAN-Japan EPA, RCEP, and CPTPP do not cover personal protective products such as hand sanitizers (HS code 38089400), disposable face masks (HS code 90192090), and medical/COVID test kits (HS code 300215), essential in the time of the COVID-19 pandemic. Overall, there are four key observations:

- Developing countries and LDCs have a larger list of excluded products than developed countries.
- Most of the exclusions are in pharmaceuticals rather than medical devices
- Exclusion covers many COVID-19 related essential products
- There can be country specific exclusions; for example, Thailand excluded some health products for China and Republic of Korea in the RCEP (see Table D2, Appendix D).

Thus, countries are worried about opening up their markets to key competitors.

Figure X: Example of Products Excluded from India's Commitments in the India-Japan Comprehensive Economic Partnership Agreement

HS Code 300341	•Medicaments containing ephedrine or its salts, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
HS Code 300342	•Medicaments containing pseudoephedrine or its salts, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
HS Code 300343	•Medicaments containing norephedrine or its salts, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
HS Code 300349	•Medicaments containing alkaloids or derivatives thereof, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
HS Code 300360	•Medicaments containing five antimalarial active principles, not containing hormones, steroids used as hormones or antibiotics, not measured doses or put up for retail sale

Source: Extracted from India- Japan CEPA. Available at https://commerce.gov.in/wp-content/uploads/2020/06/IJCEPA_Basic_ Agreement.pdf (last accessed 19 January 2022)

3.2.3 An Analysis of Liberalisation under Trade Agreements: An Example of Regional Comprehensive Economic Partnership vis-à-vis the Bilateral Agreements of its Members

Under the RCEP, Singapore is the only country that has eliminated customs duties in health products since enforcement of the agreement (1 January 2022). China, New Zealand, Australia, Japan and Korea eliminated custom duty on around 90 percent of health products at the entry of the agreement. Among ASEAN countries, Brunei Darussalam, Indonesia, Malaysia, the Philippines and Viet Nam eliminated custom duty on around 75 percent of health products on the date of enforcement of the RCEP.

The minimum time duration for elimination of custom duty for health products ranges between 10 years to 20 years. For example, Lao has committed to eliminating customs duty for vaccines for human medicine (HS code 300220) over a period of 20 years, in the RCEP. Some more examples are given in Figure XI. Thus, many LDCs/developing countries take a long time to phase out tariffs. The long transition period reduces the benefits of tariff liberalisation at the time of the pandemic; however, it gives member states, especially LDCs and developing countries, more time to implement adjustment measures.

Figure XI: Examples of HS Codes for Tariff Elimination Duration in Select Countries in Regional Comprehensive Economic Partnership

Source: Extracted from Tariff Commitment Schedules, RCEP Agreement. Available at https://rcepsec.org/legal-text/ (last accessed 7 June, 2022)

Given that ASEAN had a trade agreement with China, that agreement was compared with the RCEP. In the RCEP, ASEAN countries (except Thailand) and China have covered more health products as compared to the ASEAN-China FTA, which was signed earlier on 29 November 2004.[39] Thus, the RCEP has a better coverage compared to the China-ASEAN FTA.

The ASEAN-Australia-New Zealand FTA (AANZA), which came into force in December 2000, currently eliminates tariffs on 90 percent of goods traded between ASEAN, Australia, and New Zealand. In the agreement, Australia, Brunei, Cambodia, Singapore and Philippines eliminated tariffs for most health products on the date of enforcement whereas Lao, PDR eliminated these in December 2020.[40] The remaining ASEAN countries have different time periods to eliminate tariffs, which is expected to be zero by 2025. Australia and New Zealand have given similar commitments in health products in the RCEP and AANZA.

In the ASEAN-Japan Economic Partnership Agreement (EPA), which came into force on 1 December 2008, Japan, Brunei, Cambodia, Malaysia and the Philippines eliminated tariffs on a majority of health products to zero at the enforcement of the agreement. Lao PDR will eliminate custom duty on health products by 2026.[41] Myanmar will reduce duty to 1.5 percent for pharmaceutical products (HS code 30)

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[39] The text of the agreement is available at https://www.jmcti.org/trade/bull/epa/data/epa_2-5.pdf and https://www.enterprisesg.gov.sg/-/media/esg/files/non-financial-assistance/for-companies/free-trade-agreements/acfta/acfta_legal_text.pdf?la=en (last accessed on 13 January 2022)

[40] https://www.dfat.gov.au/trade/agreements/in-force/aanzfta/official-documents/Pages/official-documents (last accessed on 13 January 2022)

[41] https://www.mofa.go.jp/policy/economy/fta/asean/annex1.html (last accessed on 13 January 2022)

and eliminate tariffs on medical devices and other health products by 2026. Most duties will be eliminated by 2026.

Some bilateral agreements of ASEAN countries like Brunei Darussalam, Indonesia, Malaysia and the Philippines have better commitments than under the RCEP. By contrast, Viet Nam has given better commitment in the RCEP compared to that in its other three ASEAN FTAs. Thailand is the only country that has excluded some of health products for China and the ROK under the RCEP. Therefore, some studies concluded that RCEP has less coverage in terms of depth of commitments and offers a slower reduction in tariffs (longer period of tariff phasing out), including tariff phasing out in health products, compared to other regional agreements such as the CPTPP and the ATIGA (PwC, 2020).

In the case of COVID-19 related products, no ASEAN member countries have given commitment in medical kits including COVID kits (HS code 300211) in the RCEP. In ATIGA, some ASEAN countries have given liberal commitments in medical kits (HS 300211). For example, Brunei, Lao PDR, Malaysia, Singapore, Thailand, and Viet Nam have had zero percent tariff for medical kits since 2017. In the RCEP, Australia, China, Japan, Korea, New Zealand and Malaysia have not given commitment in masks (HS code 630790), whereas some ASEAN countries such as Brunei, Indonesia, the Philippines and Viet Nam have committed to zero tariff for masks (HS code 630790) since the implementation of the agreement (1 January 2022). Thailand has committed to reducing tariff on masks (HS code 630790) to zero from year 10 onwards, whereas Cambodia has committed from year 15 onwards. Myanmar has not committed to reducing or eliminating the tariff of 15 percent on masks (HS code 630790).

To summarise, RCEP came after ATIGA and the bilateral agreements between RCEP member states. In many cases, tariffs have been eliminated on entry into force or phased out over time through the bilateral agreements among the RCEP member countries, even before the RCEP. Yet, some studies show that RCEP is more beneficial for ASEAN than ATIGA and bilateral trade agreements with its trading partners such as China, Japan, Republic of Korea, Australia and New Zealand (Petri and Plummer, 2020; Thangavelu, et. al., 2021). This is because the RCEP provides a new framework for regional integration of trade and investment that builds on bilateral FTAs to multilateral FTAs, such as the ASEAN+1 FTAs of ASEAN-China, ASEAN-Korea, ASEAN-Japan, and ASEAN-Australia-New Zealand, which were initiated in the early 2000s. RCEP is the first FTA between China and Japan as well as between Japan and Korea (PwC, 2020) and provides a greater platform for regional integration in terms of opening up domestic and regional markets for further trade and investment integration (Thangavelu, et. al., 2021). Some studies point out that the economic impact of RCEP is significant enough to mitigate the negative effects of trade and economic shocks, such as the US-China trade war (Petri and Plummer, 2020) and the negative effects of the COVID-19 pandemic (Thangavelu, et. al., 2021).

Box 2: Impact of Regional Comprehensive Economic Partnership

The impact of the RCEP will depend on the depth of the commitments, and in some cases, commitments are lower than the bilateral agreements of RCEP member countries. The coverage of critical heath products, especially those needed for addressing the COVID-19 pandemic is low. Japan and Australia seem to eliminate tariff at the time of enforcement of their trade agreements, and they are also members of the WTO Pharmaceutical Agreement.

3.2.4 An Analysis of Tariff Liberalisation under Trade Agreements: Comprehensive and Progressive Agreement for Trans-Pacific Partnership

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) came into force on 30 December 2018 and aims to eliminate more than 98 percent tariffs overall. Within health products, Viet Nam, which has a tariff of 7 percent

on products such as medicines in doses for retail sale, has committed to eliminating these under the CPTPP.[42]

3.2.5 An Analysis of Liberalisation under Trade Agreements: Focusing on Necessary Goods for Vaccination in Trade Agreements

Asia-Pacific countries have liberalised tariff on goods necessary for vaccination such as needles and syringes, rubber gloves, etc., in their trade agreements. For examples, see Table 3.

Table 3: Examples of Vaccination Products Liberalised under Various Trade Agreements

Trade Agreement/ Countries	Products and HS Codes	Tariff Liberalisation Commitment
RCEP		
China, Japan, Republic of Korea, New Zealand, and ASEAN countries (Brunei, Malaysia, Philippines, Thailand)	• gloves (including rubber gloves) (HS code 401511 and 401519) • needles and syringes (HS code 901832)	0 percent tariff at the time of implementation of the agreement (January 2022)
Australia	• gloves (HS code 401511 and 401519)	reduce tariff to 0 percent from year 20 onwards
Viet Nam	• gloves (HS code 401511 and 401519) • needles and syringes (HS code 901832)	reduce tariff to 0 percent from year 10
Lao, PDR and Myanmar	• gloves (HS code 401511 and 401519) • needles and syringes (HS code 901832)	reduce tariff from year 13 onwards;
Cambodia and Indonesia	• gloves (HS code 401511 and 401519) • needles and syringes (HS code 901832)	reduce to 0 percent from year 15 onwards
ATIGA		

[42] CPTPP being an open-access FTA, other countries can join in.

Cambodia, Indonesia, Lao, PDR and Viet Nam	• gloves (HS code 401511 and 401519) • needles and syringes (HS code 901832)	0 percent tariff since 2017
ASEAN-Australia-New Zealand FTA		
Australia	• gloves (HS code 401511 and 401519)	eliminated tariff to 0 percent since 2012
India-Japan CEPA		
India	Under B10 category, • gloves (HS code 401511 and 401519) • needles and syringes (HS code 901832)	0 percent tariff since 1 January 2021

Source: Compiled by Authors

3.2.6 Different Phasing Out Period under Different Trade Agreements of the same country

Many countries in the Asia-Pacific region including countries like India and Thailand have given different commitments to different trade partners, with different exclusion lists and different phasing out periods (see Box 3).

Box 3: Examples of Different Exclusion Lists and Phasing Out Period in Different Agreements: India-Japan and India-Korea Comprehensive Economic Partnership Agreement

In the India-Japan CEPA, India made commitment in most product categories from vaccines for human medicine such as cholera, typhoid, etc., (HS 3002) to other alternative medicines such as ayurvedic, *unani*, homoeopathic, *siddha* or bio-chemic systems medicaments for retail sale (HS Code 3003) under 'B10' category with an elimination period of ten years (from 1 August 2011 to 31 December 2020).

In the India-Korea CEPA, India made commitment in most pharmaceutical product categories under the 'E-8' category with an elimination period of eight years; these have been duty free since 1 January 2017. This shows that in pharmaceutical products, tariff liberalisation has been faster under the India-Korea CEPA (eight years) as compared to the India- Japan CEPA (10 years).

Overall, the shorter the phasing out period for tariff, the greater is the benefit of the trade agreement. Trade agreements that seek to eliminate tariff at the time of implementation seem to be the best. If the tariff phasing out period is longer, autonomous liberalisation by a country can at times be better (or lead to lower tariffs) than its commitments under a trade agreement. In that case, the utilisation, and hence, the benefits of the trade agreement are lower.

3.3 Rules of Origin

“Rules of origin” (RoO) is a criterion used to define where the product is made. RoO ensures that preferences are available only to the signatories to the agreement and that imports from non-members do not avoid customs duties by entering through the member country with the lowest tariff. In other words, RoO ensures there is no trade diversion from third countries through trade agreements. The country of origin of the product is usually the country where the last substantial transformation took place. Certain agreements like SAFTA allow differential rules of origin for different countries, giving certain relaxations to LDCs. While the requirement of substantial transformation is universally recognised, there are wide differences among governments in the Asia-Pacific on how it should be applied. Some apply the criterion of change of tariff classification, others apply the ad-valorem percentage criterion and some apply the criterion of manufacturing or processing operation.

For manufactured goods, rules of origin are primarily of three types: i) a change in tariff heading (CTH Rule) defined at the six-digit Harmonised System level ii) a value-added (VA Rule) usually defined as a minimum percentage of regional value content necessary to confer origin or by a maximum amount of non-originating content allowed in order to confer origin and iii) a specified process (SP Rule) defined as manufacturing operations that must be undertaken in order to confer origin. It is noteworthy that CTH and VA or SP rules are frequently combined in rules of origin in plurilateral trade agreements (PTAs). In the case of the pharmaceutical sector, the regional value addition is 50 percent in certain agreements, like in the Agreement between Japan and the United Mexican States for the Strengthening of the Economic Partnership, signed in September 2004.

Often, a very high percentage of value addition in the RoO acts against value chain development in health sector products, which needs to be looked into. Some of the more recent agreements, for example, the India-United Arab Emirates CEPA, have more rigid RoO, which can have an implication for the health sector (see section 5). With the proliferation of trade agreements, multiple RoO and, complexities in complying with them can add to trade costs, discouraging businesses from taking advantage of FTA privileges. The RCEP has tried to harmonise the RoO in the region and added more clarity, according to policy experts from RCEP member countries. However, only after examining the utilisation of the agreement can one draw conclusions, as exporters and importers may continue to use other bilateral and regional agreements.

3.4 Non-Tariff Measures: Technical Barriers to Trade and Sanitary and Phytosanitary Measures

Non-tariff measures under the trade agreements cover a wide range of issues from the process of approval of a drug to mutual recognition of standards and processes and degrees of practitioners to labelling requirements. For example, the RCEP contains enhanced trade facilitation measures and other provisions that respond to concerns regarding non-tariff barriers affecting trade. Many of these are expected to improve the status quo under existing FTAs such as the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) and extend some of the high standards contained in the CPTPP to a broader set of RCEP trading partners. It is expected that these chapters of mega-regional agreements will help lower compliance costs, reduce the time exporters spend waiting for goods to clear customs, and enhance transparency and predictability for businesses. In this section, we focus on the technical barriers to trade (TBT) and sanitary and phytosanitary measures (SPS) and examine how they have been addressed under different trade agreements. Other areas have been covered under subsequent sections of this report.

As health is a justifiable and legitimate reason for imposing restrictions on trade, TBT and SPS agreements aim to advance cooperation and harmonisation based on international standards while preventing unnecessary barriers to trade (Trivedi et, al., 2019 and WHO an WTO Secretariat, 2002). The TBT Agreement of the WTO aims to

ensure that regulations, standards, testing and certification procedures do not create unnecessary barriers by ensuring greater harmonisation through national treatment and use of internationally agreed standards in product regulations.

To maintain food safety standard and health, there is a separate SPS Agreement. This agreement allows members to take any measures necessary to protect human, animal, plant life or health, provided they are consistent with the agreement. For example, restrictions other than those allowed in the agreements have to be substantiated by properly documented, scientific evidence (WHO and WTO Secretariat, 2002) WTO members in the Asia-Pacific are required to abide by these two agreements. In their regional and bilateral agreements, there are separate chapters on TBT and SPS; the provisions of some may go beyond the WTO, as, for example, when the process of regulatory cooperation is more clearly laid down or definitional issues are addressed. These are discussed below.

3.4.1 Provisions under the Comprehensive and Progressive Agreement for Trans-Pacific Partnership

The annexes of the CPTPP TBT chapter deal with specific challenges to trade in pharmaceuticals, medical devices and technology products. The provisions commit the members to define what medical products are and when they are subject to state laws. This information has to be published. According to the KIIs, TBT annexes on pharmaceutical products, medical devices and cosmetics, improve the information available to importers and exporters and reduce unnecessary delays in approvals, thus improving standard-setting in CPTPP countries for these industries. It is expected that the annexes will help optimise regulatory approvals and make regulations clearer. At the same time, many provisions of CPTPP are WTO plus and developing countries may have concerns related to undertaking regulatory commitments.

3.4.2 Provisions under the Regional Comprehensive Economic Partnership

RCEP Chapter 6, ‘Standards, Technical Regulations, and Conformity Assessment Procedures’, includes provisions to enhance transparency in the development of TBT measures in the RCEP region and promote scope for greater regulatory cooperation and good regulatory practice. In the longer-term, this is expected to lead to regulatory frameworks in RCEP markets that would make it easier for exporters of RCEP

countries to determine the requirements for exporting. The chapter aims to provide mechanisms for parties to address specific trade issues and reduce or eliminate unnecessary TBTs.

RCEP Chapter 5 *'Sanitary and Phytosanitary Measures'* sets out the basic framework for developing, adopting and applying SPS measures to protect human, animal or plant life health and to facilitate trade by minimising the negative trade effects of SPS measures. In the chapter, certain provisions have been agreed upon to enhance the implementation of the WTO SPS Agreement, taking into account relevant international standards, guidelines, and recommendations with regard to equivalence, adaptation to regional conditions, including pest or disease-free areas\ and areas of low pest or disease prevalence, risk analysis, audit, certification, import checks, and emergency measures. This chapter also emphasises the importance of transparency, cooperation, communication and technical consultations in addressing SPS matters.[43] The RCEP SPS chapter provides better outcomes than other agreements such as the AANZFTA in a number of ways including the following:

- **Equivalence:** It encourages SPS measures that achieve the same level of protection, (i.e., equivalent without having to be identical) and regionalisation (promoting acceptance of regional conditions, including pest or disease-free areas and areas of low pest or disease prevalence).

- **Emergency measures:** If a Party adopts an emergency SPS measure that affects another Party's trade, it is required to hold discussions on request and take due account of information provided.

- **Transparency:** The SPS chapter contains several provisions that require Parties to provide documents in English rather than different languages, which is a much better outcome than both CPTPP and AANZFTA.[44] Legal information in local languages can be a barrier to trade.

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[43] RCEP - CHAPTER 5: SANITARY AND PHYTOSANITARY MEASURES (thuvienphapluat.vn) (last accessed on 21 January 2022)

[44] https://www.mfat.govt.nz/br/trade/free-trade-agreements/free-trade-agreements-in-force/regional-comprehensive-economic-partnership-rcep/information-for-exporters-and-smes/ (last accessed 21 January 2022)

3.4.3 Examples of Provisions Under Different Trade Agreements

India's trade agreements are aligned with the WTO's SPS and TBT Agreements as is the case in a number of ASEAN+1 FTAs. The ASEAN-Australia-New Zealand FTA (AANZFTA), the ASEAN-Japan Economic Partnership Agreement (EPA), the ASEAN-India Trade in Goods Agreement and the ASEAN-Korea FTA all reaffirm the rights and obligations of parties under the WTO TBT and SPS Agreements. India is the first CEPA partner of Japan with whom Japan has agreed to commit on the approval procedure for generic medicines ('Article 54 Cooperation in Generic Medicines') (WTO, 2020). Japan provides "national treatment" to Indians for the application of approvals for release of generic medicines and completion of procedures within a reasonable period of time.

The scope for technical collaborations, regulatory cooperation, and sharing of information are laid down in these agreements. For example, under the India-Korea CEPA, a Joint Working Group was set up to address specific TBT or SPS issues within a reasonable period of time, based on science and risk-based assessment.

The ASEAN+1 FTAs also establish sub-committees to oversee implementation of the relevant provisions of their SPS and TBT chapters. Whilst the ASEAN-China FTA agreements do not substantively address the issue of TBT and SPS measures, China and ASEAN nevertheless adopted a Memorandum of Understanding on Strengthening Cooperation in the field of Standards, Technical Regulations and Conformity Assessment Procedures in 2009.

All ASEAN+1 FTAs contain provisions on non-tariff barriers, which either impose an obligation on the parties not to adopt or maintain such measures except in accordance with WTO rights and obligations, or generally reaffirm relevant WTO disciplines in this area. Furthermore, AANZFTA, ASEAN-Korea FTA and ASEAN-China FTA include specific provisions regarding the identification and review of non-tariff measures (Wong and Pellan, 2012).

3.4. Commitments in Healthcare Services under Trade Agreements in Services

In Asia-Pacific, countries/regional blocs have followed different approaches for scheduling commitments in their trade agreements. Some of the earlier agreements

and agreements of countries like India follow a positive list approach[45] for selecting the sectors and a negative list approach for listing barriers. Barriers include market access barriers and national treatment barriers as given in Appendix E.

Asia's largest regional agreement, the RCEP, follows a negative list approach to service commitments, which requires Member States to schedule their service commitments and provide service suppliers information on their existing measures and regulations. There is a six-year transition period from the existing 'positive list approach' for some member countries (such as Cambodia, China, Lao PDR, Myanmar, New Zealand, Philippines, Thailand and Viet Nam) to the 'negative list approach'.[46,47] These RCEP member countries follow different versions of UNCPC to cover health services. For example, Myanmar, the Philippines, and China used the UNCPC Provisional version, whereas Cambodia, Lao PDR and Thailand used the UNCPC Version 1.1 and Viet Nam used the UNCPC Version 2.1.[48] Like RCEP, CPTPP also follows a 'negative list approach' for commitments in health services. Some ASEAN countries such as Brunei, Singapore, Viet Nam; and New Zealand have included health services under their negative list.[49]

Examples of different approaches that countries follow in scheduling commitments are presented in Figure XII. In general, negative listing is said to give more clarity in commitments, but the approach followed may not indicate the depth of commitments in the health sector. It depends on many things including the classification used and whether the trade agreement is binding the regulatory regime and/or giving forward looking commitments.

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45 The "positive list" is a commitment approach under which the subject sectors of liberalisation and the conditions and restrictions are specifically and explicitly inscribed in the list regarding national treatment and market access, and no obligations are to be undertaken regarding national treatment and market access with respect to any other sectors which are not inscribed in the positive list.

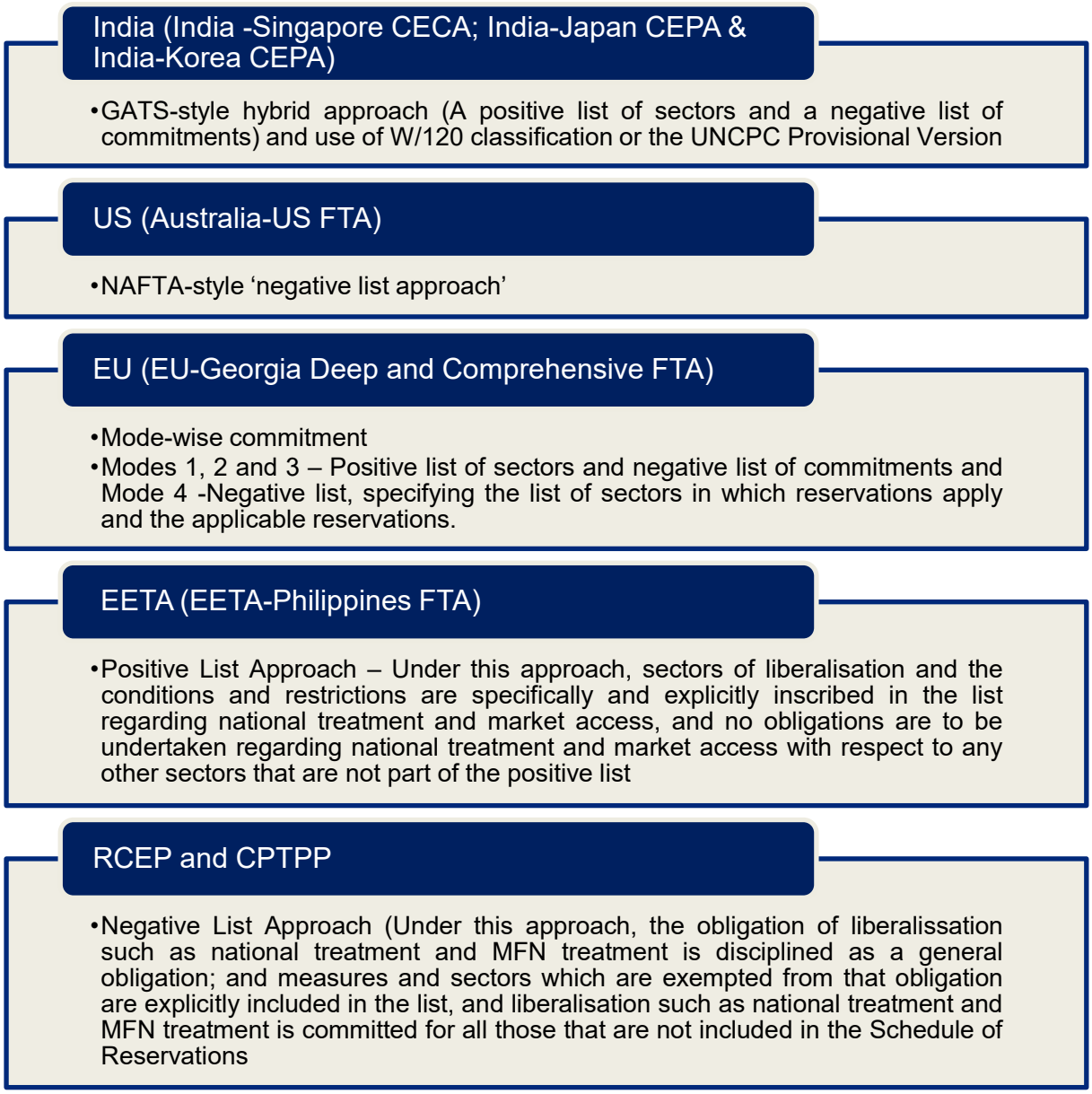
46 The "negative list" is a commitment approach under which the obligation of liberalisation such as national treatment and MFN treatment is disciplined as a general obligation; and measures and sectors which are exempted from that obligation are explicitly included in the list, and liberalisation such as national treatment and MFN treatment is committed for all those that are not included in the Schedule of Reservations

47 https://wts.com/global/publishing-article/20210325-asia-customsnl~publishing-article?search%5Bterm%5D= (last accessed 7 December 2021)

48 The text of the agreements is available at https://rcepsec.org/legal-text/ last accessed 25 January 2022)

49 https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/comprehensive-and-progressive-agreement-for-trans-pacific-partnership-cptpp/comprehensive-and-progressive-agreement-for-trans-pacific-partnership-text-and-resources/#bookmark3 (last accessed 25 January 2022)

Figure XII: Scheduling Approach for Commitments in Asia-Pacific Free Trade Agreements



Among the regional blocks, ASEAN has taken significant steps to facilitate trade in services in the health sector within the region (see Box 4). However, ASEAN bilateral FTAs follow different approaches. Some trade agreements such as the ASEAN-China FTA, ASEAN-Korea FTA, ASEAN-Australia-New Zealand FTA, etc., follow a positive

list approach, whereas the Australia-Singapore FTA, Korea-Singapore FTA, etc., follow a negative list approach.[50]

Box 4: Deeper Integration in Health Services by ASEAN: An Example

The ASEAN's 'Framework Agreement on Trade in Services' adopts a positive list approach with a long-term objective to eliminate restrictions on trade in services through negotiations. The commitments by ASEAN members in health services were of a GATS-plus nature (apart from Mode 4, which is mostly at GATS level). The health services sector was identified as a priority sector; therefore, the liberalisation of health services is advanced through the "ASEAN minus X" formula, which allows some countries to move forward and enter into agreements, even if others are not yet ready to commit (WHO, 2015). ASEAN member countries used the UNCPC provisional version for coverage of health services. In October 2020, ASEAN replaced the ASEAN Framework Agreement on Services (AFAS) with the ASEAN Trade in Services Agreement (ATISA). ATISA builds upon the achievements made by ASEAN member countries in AFAS. In ATISA, there is a shift from a 'positive list approach' followed in AFAS to a 'negative list approach', which was considered to be the best practice for services liberalisation in the ASEAN and which will provide service suppliers a higher level of confidence in the ASEAN region. Member countries such as Cambodia, Lao PDR, Myanmar, the Philippines, Thailand and Viet Nam, that had no prior commitments in 'negative listing' had to conduct a review and audit of national regulations that affect their respective services sector as preparation to adopt 'negative listing'.

Source: https://www.iseas.edu.sg/images/pdf/ISEAS_Perspective_2019_54.pdf (last accessed January 25, 2022)

3.4.1. Commitments Across Different Agreements: By Sub-Sectors and By Modes of Services

Table 4 depicts a comparison of commitment by selected Asia-Pacific countries across Modes 1, 2 and 3 in some of their trade agreements. Overall, ASEAN countries have given more liberal commitments in the RCEP as compared to ASEAN-China FTA.

[50] https://www.iseas.edu.sg/images/pdf/ISEAS_Perspective_2019_54.pdf (last accessed 25 January 2022)

Some ASEAN countries such as the Philippines and Thailand have given commitments in most subsectors of health services in the RCEP as compared to ASEAN-China FTA, whereas others such as Lao DPR and Viet Nam have given commitment only in selected health services such as hospital services in the RCEP. China has given commitment only in medical and dental services in both RCEP and ASEAN-China FTA. This shows that China has not progressed far in terms of commitments in health services even in the recent RCEP.

Commitments vary by sub-sectors across different agreements. For example, India and Japan gave commitment in three sub-sectors, namely, medical and dental services, services provided by midwives, nurses, etc., and hospital services in the India-Japan CEPA but in the Japan-Philippines EPA, hospital services and other human health services (i.e., medical services delivered in ambulance services, residential health facilities services other than hospital services and blood collection services) have been covered.

Australia has given commitment only in other human health services (such as podiatry and chiropody services) in the ASEAN-Australia-New Zealand FTA whereas New Zealand has not given a commitment in any of the subsectors of health services in the same agreement or in its FTA with Malaysia. Overall, trade agreements between two developed countries have covered more subsectors than those among developing countries or between developed and developing countries.

Table 4: Mode-wise Commitments of Select Asia-Pacific Countries in Select Trade Agreements

Country	Medical and dental service (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, Diagnostic imaging services, etc. (8.D)	Medical and dental service (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, Diagnostic imaging services, etc. (8.D)
	RCEP					ASEAN-China FTA				
Cambodia										
Mode 1	∞	×	◊	×	×	∞	×	◊	×	×
Mode 2	◊	×	◊	×	×	◊	×	◊	×	×
Mode 3	◙	×	◙	×	×	◙	×	◙	×	×
Lao PDR										
Mode 1	×	×	∞	×	×	×	×	×	×	×
Mode 2	×	×	◊	×	×	×	×	×	×	×
Mode 3	×	×	◊	×	×	×	×	×	×	×
Myanmar										
Mode 1	◊	◊	◊	×	×	◊	◊	×	×	×

Country	Medical and dental service (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, Diagnostic imaging services, etc. (8.D)	Medical and dental service (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, Diagnostic imaging services, etc. (8.D)
Mode 2	◊	◊	◊	×	×	◊	◊	×	×	×
Mode 3	◙	◙	◙	×	×	◙	◙	×	×	×
Philippines										
Mode 1	◊	◊	∞	×	∞	×	×	×	×	×
Mode 2	◊	◊	◊	×	◊	×	×	×	×	×
Mode 3	∞	∞	◙	×	◙	×	×	×	×	×
Thailand										
Mode 1	×	◊	◊	◊	◊	×	×	×	×	×
Mode 2	×	◊	◊	◊	◊	×	×	×	×	×
Mode 3	×	◙	◙	◙	◙	×	×	×	×	×
Viet Nam										
Mode 1	◊	◊	◊	×	×	◊	◊	×	×	×

Country	Medical and dental service (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, Diagnostic imaging services, etc. (8.D)	Medical and dental service (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, Diagnostic imaging services, etc. (8.D)
Mode 2	◊	◊	◊	×	×	◊	◊	×	×	×
Mode 3	◙	∞	◙	×	×	◙	◙	×	×	×
China										
Mode 1	◊	×	×	×	×	◊	×	×	×	×
Mode 2	◊	×	×	×	×	◊	×	×	×	×
Mode 3	◙	×	×	×	×	◙	×	×	×	×
India	India-Japan CEPA					India-Singapore CECA				
Mode 1	◙	◙	◙	×	×	◙	∞	◙	×	×
Mode 2	◊	◊	◊	×	×	◊	◊	◊	×	×
Mode 3	◙	◙	◙	×	×	◙	◙	◙	×	×
Japan	India-Japan CEPA					Japan-Philippines EPA				
Mode 1	∞	∞	∞	×	×	×	×	∞	◊	×

Country	Medical and dental service (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, Diagnostic imaging services, etc. (8.D)	Medical and dental service (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, Diagnostic imaging services, etc. (8.D)
Mode 2	◊	◊	◊	×	×	×	×	◊	◊	×
Mode 3	∞	∞	∞	×	×	×	×	∞	◙	×
Australia	ASEAN-Australia-New Zealand FTA									
Mode 1	×	×	×	∞	×					
Mode 2	×	×	×	◊	×					
Mode 3	×	×	×	◊	×					
New Zealand	ASEAN-Australia-New Zealand FTA					New-Zealand Malaysia FTA				
Mode 1	×	×	×	×	×	×	×	×	×	×
Mode 2	×	×	×	×	×	×	×	×	×	×
Mode 3	×	×	×	×	×	×	×	×	×	×

Note: Symbol '∞' represents 'Unbound' ◙' represents 'Partial commitment'; '×' represents No commitment'; and '◊' represents 'Full commitment'

Source: Compiled from legal text of Trade Agreements.

By modes of services:

- **Mode 1**: With the adoption of fourth industrial revolution (4IR) technology and digitalisation, this has become a core component of cross-border health services. This is also an area where many developing countries like India and the Philippines have export potential. Yet commitments are limited, can be subject to certain restrictions, and can vary by trade agreements. Only a few ASEAN countries have given 'full commitment' or have not imposed any barriers in sector-specific schedules for cross-border trade. For example, in Mode 1, Thailand and Viet Nam have given full commitments in two sub-sectors, namely, services provided by midwives, nurses, etc., and hospital services; and the Philippines has given full commitment in two sub-sectors, namely, medical and dental services and services provided by midwives, nurses, etc., in the RCEP trade agreement. China has given full commitment in medical and dental services in Mode 1 in the RCEP and the ASEAN-China FTA. Australia has not opened up Mode 1 for other human health services in the ASEAN-Australia FTA. India has given partial commitment with restrictions[51] in Mode 1 for medical and dental services and hospital services in both the India-Japan CEPA and the India-Singapore CECA, whereas it has not opened up Mode 1 for service provided by midwives and nurses, etc., in the India-Singapore CECA.

- **Mode 2:** This is the most liberalised mode of service delivery and most Asia-Pacific countries, including many LDCs, have given full commitment for health services under this mode in their selected FTAs. For example, Cambodia has given full commitment in Mode 2 for medical and dental services and hospital services in both the RCEP and the ASEAN-China FTA.

- **Mode 3:** This is a key mode, especially for LDCs and developing countries, to attract investment in healthcare infrastructure, but in this mode, most of these Asia-Pacific countries have only given partial commitment across health services sub-sectors. Among ASEAN LDCs, Lao PDR is the only country that

[51] None for provision of services on provider-to-provider basis such that the transaction is between established medical institutions covering areas of second opinion to help in diagnosis of cases or in the field of research.

has given full commitment in Mode 3 in hospital services in the RCEP, whereas other ASEAN LDCs such as Cambodia and Myanmar have given partial commitment in Mode 3 in hospital services in the RCEP. Even Viet Nam has opened up Mode 3 with restrictions for medical and dental services and hospital services in the RCEP. For example, foreign service suppliers are permitted to provide services in Viet Nam through the establishment of 100 percent foreign-invested hospitals, joint ventures with Vietnamese partners or through business cooperation contracts. The minimum capital investment for commercial presence in hospital services must be at least $20 million for a hospital, $2 million for a polyclinic unit and $200,000 for a specialty unit in medical and dental services and hospital services in the RCEP. Sometimes, domestic regulatory restrictions are reflected in the trade agreements while in other cases, commitments are lower than the autonomous regime. Commitments across FTAs vary. For example, India has placed several restrictions in Mode 3 in medical and health services, services provided by midwives, nurses, etc., and hospital services in the India-Japan CEPA. These include FDI being allowed only through incorporation with a foreign equity ceiling of 74 percent and subject to the condition that the latest technology for treatment will be brought in. Publicly funded services may be available only to Indian citizens or may be supplied at differential prices to persons other than Indian citizens. However, in the India-Singapore CECA, India allowed 100 percent FDI in hospital services, which is aligned with the autonomous regime. Since 2000,[52] India has allowed 100 percent FDI in the construction of hospitals. Given that India is trying to develop as a healthcare services hub, commitments lower than the autonomous regime to trading partners like Japan show that Mode 3 has not been adequately covered under trade agreements.

- **Mode 4:** Some countries have the potential to export healthcare workers, while others face shortages that can be mitigated by cross-border temporary movement of healthcare workers (including professionals, specialists, nurses, etc.). Across all the agreements, Mode 4 is either kept 'Unbound/no

[52] For details, see p.no. 70, DIPP (2006).

commitments' or 'Unbound except as indicated in the horizontal commitments of their schedule" for all health services. Some countries such as India have kept Mode 4 Unbound until the signing of MRAs. For example, in the India-Singapore CECA, India's commitment in Mode 4 is 'Unbound pending finalisation of MRA', which means Mode 4 will be open after finalisation of MRAs in medical and dental services and services provided by midwives, nurses, etc. In addition, there are separate chapters or annexes under Mode 4, which are applicable to the health sector and are discussed in subsection 3.5.1.

Overall, commitments in trade in services by coverage of sub-sectors and across the three Modes 1, 3 and 4 are extremely limited, which takes away the benefits of the trade agreement. Some countries like India and Thailand are now trying to seek greater market access for healthcare service providers in traditional medicine and preventive healthcare through their trade agreements. For example, Thailand has covered 'spa workers' in its agreement with Australia.

3.4.2. Facilitating Movement of Natural Persons

The movement of health professionals such as nurses, medical doctors, etc., are also covered under a separate chapter in many Asia Pacific trade agreements. For example, in the Japan-Viet Nam Economic Partnership Agreement, the movement of nurses is covered under Chapter 8: Movement of Natural Persons (Annex 7).[53] In this agreement, Japan made two commitments (a) the granting of entry for one to three years for a natural person of Viet Nam who has qualified under Japanese law by passing the *kangoshi* (nurse) examination in Japanese and (b) an undertaking to negotiate within two years from the entry into force of the agreement the possibility of accepting Vietnamese qualified nurses. Following an exchange of diplomatic notes on the "Entry and temporary stay of the natural persons of Viet Nam who engage in supplying services as nurses or certified care workers or related activities in Japan", Japan began accepting Vietnamese candidates for nurses and care workers as of 2014 (WTO, 2019b).

[53] The text of the agreement is available on website of Ministry of External Affairs, Japan, https://www.mofa.go.jp/region/asia-paci/vietnam/epa0812/index.html (last accessed 6 June 2022)

The India-Singapore CECA also covered the mobility of 27 categories of Indian health professionals[54] out of 127 professional service categories in 'Chapter 9: Movement of Natural Persons' (Annex 9A). These professional categories can engage in the host country as long as they have equivalent degrees conferred by institutions in India and Singapore. In addition, under the CECA, India and Singapore decided to negotiate and conclude mutual recognition agreements (MRAs) in medicine (doctors), dentistry and nursing; they concluded the MRA for nursing subsequently (see Section 4.1).

3.5. Mutual Recognition of Standards, Qualification and Cooperation

Mutual recognition of standards for goods and qualifications and experience for services can be part of trade agreements or outside it, through bilateral or regional arrangements. The same is true for memorandums of understanding (MoUs) and collaborations. Some Asia Pacific trade agreements have provisions for MRAs and MoUs and cooperation (see section 4.1).

3.6. Investment in Healthcare and Trade Agreements

Investment can be a part of a chapter in trade agreements, or they can be covered under the Bilateral Investment Treaties (BITs). Apart from these, membership of an international organisation such as the International Centre for Settlement of Investment Disputes (ICSID)[55] can help to secure a transparent environment and/or protect foreign investment. There can also be standalone investment agreements. The EU-China Investment Agreement, 2020 is one such example. These are discussed below.

3.7.1. Investment Chapter in Trade Agreements

In the comprehensive trade agreements in Asia Pacific, investment is generally covered under a separate chapter. In Asia-Pacific, a majority of the countries follow the negative

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[54] 1. Neurologist, 2. Medical Pathologist, 3. Clinical Pathologist, 4. Veterinary, 5. Pathologist, 6. Pharmacologist, 7. General Physician, 8. General Surgeon, 9. Specialised Surgeon, 10. Anaesthetist, 11. Psychiatrist, 12. Obstetrician & Gynaecologist, 13. Paediatrician, 14. Endocrinologist, 15. Dermatologist, 16. Ophthalmologist, 17. Cardiologist, 18. Radiologist, 19. Industrial Physician, 20. Medical Service Physician (School), 21. Public Health Physician, 22. Dentist (General), 23. Specialised Dentist, 24. Veterinarian, 25. Veterinary Epidemiologist, 26. Pharmacist (Dispensing), 27. Other Pharmacists.

[55] The ICSID, the world's leading, independent institution devoted to dispute settlement regarding international investment, was established in 1966 by the Convention on the Settlement of Investment Disputes between States and Nationals of Other States. An independent institution, ICSID provides confidence in the dispute resolution process and hence, promotes international investment.

list approach in the investment chapter. The inclusion of a chapter on investment in a trade agreement boosts investor confidence to enter a country's market.

The CPTPP and the RCEP are two of the most prominent international agreements that cover investment. In the CPTPP, the investment chapter (Chapter 9) has provisions covering the investor and the full life cycle of an investment. Along with MFN obligations, national treatment, etc., the chapter includes standard, though narrowed, investor-state dispute settlement (ISDS) provisions, (for example, private companies cannot make ISDS claims for investment contracts with the government (Corr, et al., 2019)). The RCEP agreement (Chapter 10)[56] uses an asset-based definition of investment, and also states that "*For greater certainty, this Chapter does not bind any Party in relation to any act or fact that took place or any situation that ceased to exist before the date of entry into force of this Agreement"*.[57]

Table 5 shows that the coverage of the health sector is limited in the investment chapters. Even countries like Australia and New Zealand did not open this sector as it is a public good. Only a few countries, namely Brunei, Malaysia, Japan, Singapore, Viet Nam and the Republic of Korea, have made commitments and among these, Malaysia is the only country which has covered most of the sub-sectors (except other services) under the investment chapter in both FTAs – RCEP and CPTPP. According to the KIIs, the limited coverage of this sector in the investment chapter deters cross-border investment flows, especially from developed to developing countries and LDCs, unless there are bilateral investment treaties (BITs). Investment in social sectors like hospitals have a long gestation period and unless such investments are secured through trade agreements, investors pointed out that they have an uncertain operating environment.

[56] The text of the agreement is available at https://rcepsec.org/legal-text/
[57] https://rcepsec.org/wp-content/uploads/2020/11/Chapter-10.pdf (last accessed 6 June 2022))

Table 5: Coverage of Health Sector by Asia-Pacific Countries in the Investment Chapter in the Regional Comprehensive Economic Partnership and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership Agreement

Country	Medical and dental services (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, diagnostic imaging services, etc. (8.D)	Medical and dental services (1.A.h)	Services provided by midwives, nurses, physiotherapists, and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, diagnostic imaging services, etc. (8.D)
	RCEP					CPTPP				
Australia	×	×	×	×	×	×	×	×	×	×
Brunei	×	√	×	√	√	√	×	√	×	√
Japan	√	√	×	×	×	×	×	√	√	×
Malaysia	√	√	√	√	×	√	√	√	√	×
New Zealand	×	×	×	×	×	×	×	×	×	×
Singapore	√	√	×	√	×	√	√	×	√	×
Viet Nam	×	×	×	×	×	×	×	√	√	×
Cambodia	×	×	×	×	×	Not a member				
China	×	×	×	×	×	Not a member				

Country	Medical and dental services (1.A.h)	Services provided by midwives, nurses, physiotherapists and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, diagnostic imaging services, etc. (8.D)	Medical and dental services (1.A.h)	Services provided by midwives, nurses, physiotherapists, and para-medical personnel (1.A.j)	Hospital services (8.A)	Other Human Health Services (8.B)	Other services such as ambulance services to private hospitals, diagnostic imaging services, etc. (8.D)
Indonesia	×	×	×	×	×	Not a member				
Lao	×	×	×	×	×	Not a member				
Myanmar	×	×	×	×	×	Not a member				
Philippines	×	×	×	×	×	Not a member				
Republic of Korea	×	×	×	√	×	Not a member				
Thailand	×	×	×	×	×	Not a member				

Source: Compiled from legal text of trade agreements – RCEP and CPTPP.

Notes: x denote health is not covered in the investment chapter

3.7.2. Bilateral Investment Treaties and International Centre for Settlement of Investment Disputes

Studies have shown that investment treaties contribute to a reasonable increase in foreign direct investments as they provide security and commitment to foreign investors and increase their confidence to enter the market of a country. As of date, there are 1143, bilateral investment treaties[58] signed by Asia-Pacific countries, which account for 50 percent of the world's total investment treaties. Among Asia-Pacific countries, China has the maximum number of investment treaties (107), followed by the Republic of Korea (88) and Turkey (81). These BITs help in building trust and confidence and promotes healthy cooperation between the two countries and helps streamline an uninterrupted flow of foreign investment by investors and companies by following a set pattern of terms and conditions.

Out of 53 Asia-Pacific countries, 33 countries are signatory to ICSID.[59] Countries such as India and Viet Nam, which have several trade agreements/BITs, are still not signatories to ICSID.[60] In 2017, India withdrew a majority of its BITs in force.

3.7. Traditional Medicines/Preventive Health Care in Trade Agreements

Traditional medicines have emerged as an important area for trade and collaboration in the Asia-Pacific region. Traditional medicine describes a group of health care practices and products developed by different cultures that incorporate plant, animal and mineral-based medicines, spiritual therapies and manual techniques designed to treat illness or maintain wellbeing.

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[58] A BIT is "an agreement executed by two sovereign States to promote and protect foreign investment". The treaties promise bilateral cooperation beneficial to both the countries involved. These ensure that investors of one country receive national and most favoured nation (MFN) treatment in the other country, along with fair and equitable treatment and full protection and security, expropriation and a dispute settlement mechanism. One of the most important features of the BITs is it allows foreign investors to sue the host nation in case of any violation directly by submitting claims to arbitration instead of to local courts.

[59] These include Afghanistan, Armenia, Australia, Azerbaijan, Bangladesh, Brunei Darussalam, Cambodia, China, Fiji, Georgia, Indonesia, Japan, Kazakhstan, Republic for Korea, Kyrgyzstan Republic, Malaysia, Mongolia, Micronesia (Federated States of), Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines. Russian Federation. Samoa, Singapore, Sri Lanka, Thailand, Timor-Leste, Tonga, Turkey, Turkmenistan and Uzbekistan. More details available at https://icsid.worldbank.org/about/member-states/database-of-member-states (last accessed 10 December 2021)

[60] Other non-signatory Asia Pacific countries are Bhutan, American Samoa, , Cook Islands, French Polynesia, Guam, Kiribati, Iran (Islamic Republic of), Maldives, Hong Kong, China; Japan; Macao, China;; Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Solomon Islands, Tuvalu, Vanuatu Tajikistan Lao People's Democratic Republic and Myanmar

> The World Health Organization WHO defines traditional medicine as "the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses" (Abbott, et. al, 2014).

Some of the best-known alternative medicine systems in Asia-Pacific countries include Indian Ayurveda medicine, traditional Chinese medicine (TCM), the *Siddha* systems of medicine (Sri Lanka, Singapore and Malaysia), Thai massage or *nuad thai*, traditional Thai herbs, hot herbal compresses and herbal steam baths and the Practice of *dhammanamai* (Thailand),[61] *Jamu* (Indonesia) and the *Koryo* medicine system the Republic of Korea) (Chaudhary and Rafei, 2001). Some of the other Asia-Pacific countries that are influenced by traditional medicines include Bhutan, Bangladesh, Maldives, Myanmar, Nepal, and Pakistan.

Apart from medicines, practices such as yoga, an ancient physical, mental and spiritual practice that originated in India, is gaining prominence. Yoga is practiced in various forms around the world and recognising its universal appeal, on 11 December 2014, the United Nations recognised 21 June as the 'International Day of Yoga' through *resolution 69/131* to raise awareness worldwide of the many benefits of practicing yoga. The importance of yoga is being realised more in the time of the COVID pandemic, as it tries to address both physical and mental health problems.

Traditional medicine has historically played a prominent role in the national health care system and remains well integrated with modern/allopathic care. China is among the pioneer countries in the region to issue (it was issued in 1949) a national policy on traditional medicines; the country also amended its Constitution in 1982 to state that *"both modern medicine and traditional Chinese medicine must be developed."* Both systems of medicine receive government support. In India, the Ministry of AYUSH (ayurveda, yoga, naturopathy, *unani*, *siddha, sowa-rigpa* and homoeopathy) has been established to encourage traditional medicines such as ayurveda, homoeopathy,

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[61] thaihealingalliance.com/wp-content/uploads/The_Role_ofThai_Traditional_Medicine_in_Health_Promotion_by_Vichai_Chokevivat_and_Anchalee_Chuthaputti.pdf (last accessed on 20 January 2022)

siddha and *unani*. Nepal has a National Policy on ayurveda, called National Ayurveda Health Policy (1995). To develop, promote and set standards for Thai traditional and alternative medicine, Thailand included it in the Fifth National Economic and Social Development Plan (198201986).[62] The Department of Thai Traditional and Alternative Medicine was established in October 2002 under the Ministry of Public Health, Thailand (Ministry of Public Health, 2020).

3.7.1. Product Recognition, Classification and Coverage of Traditional Medicines and Practices under Trade Agreements

For trade to happen, alternative medicines have to be recognised by the competent authorities (primarily drug regulators) of the importing country. In recent years, alternative medicines are recognised in many Asia-Pacific countries. For example, ayurveda is recognised as a system of medicine in South Asian countries like Nepal, Sri Lanka, Pakistan, Bangladesh, Malaysia and Mauritius. The *unani* system is recognised in Bangladesh, Sri Lanka, Malaysia and Pakistan. The *siddha* system is recognised in countries like Sri Lanka and Malaysia. *Sowa rigpa* system is recognised in Bhutan. Homoeopathy is recognised in Sri Lanka, Bangladesh and Pakistan.[63] India supplies the major share of ayurvedic medicines used in Nepal. Bhutan also recognises ayurveda as a medical system along with *unani* and Tibetan medicine, which helps facilitate exports from India to the country.[64] The Indian company, Dabur India Limited, has manufacturing units in Nepal and Bangladesh.

Trade in traditional medicine includes both products and services. In goods, the classification of traditional medicines varies across different Asia-Pacific countries. India classifies at the 8-digit level whereas China classifies at the 10-digit level. In India, these traditional medicines are covered under ‘HS code 3003’– medicaments

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[62] https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiZptnIscD1AhUMSWwGHRFwBCcQFnoECAgQAw&url=https%3A%2F%2Ftpd.dtam.moph.go.th%2Fimages%2Fak%2FHealthProfile%2FHP_2009-2010%2F2_National_Policy_and_Strategy_on_Th_ai_Traditional_Medicine_Indigenous_Medicine_and_Alternative_Medicine.pdf&usg=AOvVaw2dhgn_mg56PIb07r7ceNmP (last accessed on 20 January 2022)

[63] https://pib.gov.in/PressReleasePage.aspx?PRID=1740732 (last accessed on 20 January 2022)

[64] https://www.aapuk.net/ayurveda-abroad# (last accessed on 20 January 2022)

used as an input for its therapeutic and prophylactic use, not for retail sale[65] and 'HS code 3004' medicaments used for retail sale.[66] In China, the HS codes are HS code 3004905990 – medicaments of Chinese style, containing other composition, put up in measured doses, packings for retail sale, HS code 3004909099 – other medicaments, put up in measured doses (including in forms or packings for retail sale), and HS code 3004905910 – medicaments of Chinese style, containing endangered animals or vegetables, put up in measured doses, packings for retail sale.

Among Asia-Pacific countries, a limited number of countries such as India and China have given commitment in alternative medicines in tariff schedules in their trade agreements. Some examples of this are given in Table 6.

[65] The HS code for ayurvedic medicaments is HS code 30039011; for *unani* medicaments HS code 30039012; for *s*iddha medicaments of HS code 30039013; for homeopathic medicaments HS code 30039014; and for bio-chemic medicaments HS code 30039015.

[66] The HS code for ayurvedic medicaments is HS code 30049011; for *unani* HS code 30049012; for *siddha* medicaments HS code 30049013; for homeopathic medicaments HS code 30049014; and for Bio-chemic medicaments HS code 30049015.

Table 6: Examples of Tariff Commitments in Alternative Medicines in Asia-Pacific

Trade Agreement	Tariff Commitment	Product Examples	In effect from
India-Japan CEPA	India gave commitment to zero tariff in alternative medicines for retail sale	• Ayurvedic (HS code 30049011) • Unani (HS code 30049012) • Siddha (HS code 30049013) • Homoeopathic (HS code 30049014); and • Bio-chemic systems (HS 30049015) medicaments	1 January 2021
India-Korea CEPA	India gave commitment to zero tariff in alternative medicines for retail sale	• Ayurvedic (HS code 30049011) • Unani (HS code 30049012) • Siddha (HS code 30049013) • Homoeopathic Medicaments (HS code 30049014), and • Bio-chemic systems (HS 30049015) medicaments	1 January 2017
AIFTA	India gave commitment to reduce tariff to 5 percent in alternative medicines for retail sale	• Ayurvedic (HS code 30049011) • Unani (HS code 30049012) • Siddha (HS code 30049013) • Homoeopathic Medicaments (HS code 30049014), and • Bio-chemic systems (HS 30049015) medicaments	1 January 2017
RCEP	China gave commitment of zero tariff in Chinese medicaments	• Medicated liquors or wines (HS code 30049051) • Pien Tzu Huang (HS code 30049052) • Bai Yao (HS code 30049053) • Essential balm (HS code 30049054); and • Angong niuhuang wan (HS code 30049055)	1 January 2022
RCEP	ASEAN countries such as Brunei, Cambodia, Indonesia, Lao, PDR, Philippines, Thailand and Viet Nam have given commitment of zero tariff in herbal medicaments	• Herbal Medicaments (HS 3004909800)	1 January 2022

Source: Compiled by Authors

In services, many Asia-Pacific countries like India, Sri Lanka and Thailand have been promoting health tourism through alternative medicines and treatment (Chanda, 2017). For example, Thailand and India are two of the largest exporters of alternative medical tourism services. Thailand is known as the 'Spa Capital of Asia'. Many foreign patients come to these countries for treating illnesses like neuro-muscular and muscular-skeletal problems including limb and vertebral problems, obesity, stress management, life style related diseases, and degenerative and old age diseases such as rheumatic arthritis and osteoporosis, sinusitis, migraine, etc. These developing countries attract patients from developed countries. The Indian Ministry of Ayurveda, Yoga, Naturopathy, Unani, Siddha, Sowa-Rigpa and Homeopathy (AYUSH) has signed around 13 MoUs for setting up Ayush Academic Chairs with foreign universities to promote the education of Indian systems of medicines and ayurveda globally. Companies like Jiva Ayurveda are establishing facilities in other Asian countries. Jiva Ayurveda has a training school, Jiva Japan School, in Japan.

Among importing countries, ayurveda is recognised in Australia as a bona fide system of medicine or complimentary health medicine system. Ayurvedic practitioners from India, Sri Lanka and Nepal can directly register with the Australasian Association of Ayurveda or the Australasian Ayurveda Practitioners Association without giving any test or any course in ayurveda. After registration, Indian ayurvedic practitioners are authorised to practise in Australia.[67]

Many Asia-Pacific countries cover the mobility of specialist skills such as spa workers, spa instructors, yoga instructors, etc., under a separate chapter on 'Movement of Natural Persons' in their trade agreements. For example, in the Thailand-Japan Economic Partnership Agreement, Japan allowed Thai instructors for Thai spa services and Thai spa therapists to provide service in Japan for a period of 1 or 3 years with a provision to extend the period further.[68] In the India-Japan CEPA, Japan allowed

[67] https://www.easyayurveda.com/2016/08/07/scope-ayurveda-australia/ (last accessed on 20 January 2022)

[68] 'Annex 7 referred to in Chapter 9 Specific Commitments for the Movement of Natural Persons', p.no. 962-975, available at https://www.mofa.go.jp/policy/economy/fta/thailand.html (last accessed on 20 January 2022)

Indian yoga instructors to provide services and stay for a period of one or three years on an extendable basis in Japan.[69]

3.8. Government Procurement

Government procurements are an important part of international trade in sectors like healthcare, and hence, provisions are included in trade agreements to minimise preferential treatment for domestic goods, services, and suppliers. In this context, in 2012, based on the principles of non-discrimination, transparency and procedural fairness, a group of WTO members signed the plurilateral Agreement on Government Procurement (GPA) to ensure fair and non-discriminatory conditions of competition for purchases of goods and services by public entities. The GPA coverage extends to central government, sub-central entities and other entities. From the Asia-Pacific region, only some countries (Australia, Japan, Republic of Korea and the US) are party to the GPA. A few others like Afghanistan, India, Kazakhstan and Viet Nam have been granted observer status.[70] In this section, we look at the plurilateral government procurement agreement in the WTO and then discuss government procurement under regional trade agreements.

3.8.1. World Trade Organisation's Government Procurement Agreement

The health sector is an important sector covered under the WTO's GPA. The agreement follows a negative list approach where countries have mentioned the sectors/goods and services that governments do not want to commit under the GPA. The schedule for Australia, for example, covers the Department of Health at the central level, Canberra Health Services at the regional level and the Australian Institute of Health and Welfare in other entities. In terms of health-related goods coverage, the GPA does not cover procurement of blood and blood-related products, including plasma derived products, and in services coverage, health and welfare services and plasma fractionation services.[71] Getting coverage across central/provincial and local

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[69] 'Annex 7 referred to in Chapter 7 Specific Commitments for the Movement of Natural Persons', p.no. 962-972, available at https://commerce.gov.in/international-trade/trade-agreements/india-japan-cepa/ (last accessed on 20 January 2022)

[70] For entire list of countries, refer to https://www.wto.org/english/tratop_e/gproc_e/memobs_e.htm (last accessed on 13 January 2022)

[71] For more details, refer to https://e-gpa.wto.org/en/Appendix/Details?Agreement=GPA113&Party=Australia&AdvancedSearch=False (last accessed on 13 January 2022)

governments under a GPA agreement can facilitate trade in the health sector, according to 80 percent of the KIIs. It will also lead to more private sector engagement in healthcare.

3.8.2. Government Procurement under Trade Agreements

There is limited coverage of healthcare under government procurement in trade agreements. For example, there is hardly any commitments for this sector under the RCEP. While there is a chapter on government procurement in the agreement, it aims to promote transparent laws, regulations and procedures, and develop cooperation among the RCEP member states. Each member state is required to publish information on government procurement in the annex to this chapter, consistent with the objective of promoting transparency in government procurement. This chapter includes a review article aimed at improving it in the future to facilitate government procurement. At the same time, it states that *no party can have recourse to dispute settlement under the RCEP Agreement for any matter arising under this Chapter*.[72] Hence, it is not binding on the members of RCEP.

The India-Japan CEPA covers only the central government and the agreement is limited to the exchange of information, to the extent possible in the English language and in a timely manner, on their respective laws and regulations, policies, and practices on government procurement, as well as on any reform to existing government procurement regimes. In its more recent trade agreements as in the CEPA between India and United Arab Emirates, some central government ministries are covered by India, but healthcare is excluded.

In the Asia-Pacific, the CPTPP has the most comprehensive coverage of government procurement, which includes provisions that apply to government programmes that subsidise pharmaceuticals and medical devices. Some expert said during the KIIs that the agreement is suitable to support PPPs and could have a positive impact on the development of innovative technologies of medical devices and facilitate the transfer of necessary know-how. Specifically, the CPTPP provides for disciplining state-owned

[72] https://rcepsec.org/wp-content/uploads/2020/11/Summary-of-the-RCEP-Agreement.pdf (last accessed on 31 January 2022)

enterprises (for example, Viet Nam Pharmaceutical Company), and provides a level playing field for private companies with such enterprises.[73] According to policy experts from countries like Australia, it will provide government procurement opportunities for foreign firms to provide health and welfare services in countries like Brunei Darussalam and Malaysia. Some examples of commitments by CPTPP member countries in relation to government purchases by the Health Department or Ministry, include the purchases undertaken by all public hospitals in Malaysia and 34 hospitals operating as state-owned enterprises in Viet Nam. At the same time, since government plays a key role in procurement in developing countries and LDCs who are not members of the WTO GPA agreement, some experts argued that it is important to read the provisions under mega trade agreements and monitor how and if at all developing countries benefit from them. Since these agreements are fairly new, it will take some time to understand their impact.

Overall, the GPA framework is strong among developed countries. The WTO GPA mostly covers developed countries; agreements of developed countries like the US and EU also have reasonably good clauses to ensure transparency, clarity and non-discriminatory access to government procurement for the healthcare sector. In comparison, the inclusion of transparency and clarity in government procurement processes seems to be an issue for developing countries like India (see section 6.5).

3.9. Intellectual Property Rights

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) is an integral part of the WTO in that it covers not only patents but all other main areas of intellectual property rights like trademarks. TRIPS lays down the minimum substantive standards of protection that should be provided for in areas of intellectual property, and the procedures and remedies that should be available. The main rule relating to patentability is that patents should be available for any invention, whether a product or process, in all fields of R&D without discrimination, where those inventions meet the standard substantive criteria for patentability – namely, novelty, inventive step and industrial applicability. In addition, WTO members are required to

[73] https://www.dfat.gov.au/trade/agreements/in-force/cptpp/outcomes-documents/Pages/cptpp-health (last accessed on 13 January 2022)

make grant of a patent dependent on adequate disclosure of the invention and may require information on the best mode for carrying it out. There are certain exclusions to the above rule on patentable subjects that have a public health implication. These include (a) inventions, the prevention of whose commercial exploitation is necessary to protect *ordre public* or morality, including to protect animal or plant life or health (b) diagnostic, therapeutic and surgical methods for the treatment of humans or animals and (c) certain plant and animal inventions.[74]

Most developing countries and LDCs have already granted patent protection for pharmaceutical products prior to the entry into force of the TRIPS Agreement. These countries have adjusted their domestic laws in areas like patent term and compulsory licencing to make it TRIPS compliant. Further, LDCs originally had until 1 January 2006 to meet their TRIPS obligations. The TRIPS Council has extended this deadline three times, most recently until 1 July 2034 (decision of 29 June 2021). Thus, the agreement offers sufficient flexibility to developing countries and LDCs. In addition, the Doha Declaration on TRIPS and Public Health supports least developed and developing countries address public health problems through enhanced access to medicines, where they have insufficient or lack manufacturing capacities in the pharmaceutical sector.

While bilateral trade agreements of countries like India are TRIPS compliant, some of the trade agreements, especially those involving the developed countries like the US, are TRIPS plus. In the Trans-Pacific Partnership (TPP), there were a number of TRIPS plus provisions, which were deleted from the text of the CPTPP after the withdrawal of the US. For example, unlike the original TPP, the CPTPP does not contain any obligations on data protection or market protection for new pharmaceutical products, including biologics. Experts from countries that are signatory to the CPTPP opined that the Intellectual Property chapter of this agreement strikes a balance between promoting medical innovation and investment, and in supporting timely access to affordable medicines. They said that the chapter preserves the flexibilities given under TRIPS, including that on compulsory licensing of patents.

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[74] For details see: https://www.wto.org/english/tratop_e/trips_e/pharma_ato186_e.htm (last accessed on 13 January 2022)

At the same time, some studies show that pharmaceutical companies from developed countries are playing an increasingly active role in designing the content of the Intellectual Property chapters of trade agreements. Son (2020) found that in trade agreements with the US, the provisions for intellectual property, the scope of pricing and reimbursement decisions have been broadened and strengthened. The author concluded that new trade and industry norms are expanding their scope in low- and middle-income countries through international trade agreements, implying that some pricing and reimbursement processes are currently moving under the jurisdiction of international agreements. Through modern trade agreements, pharmaceutical companies have more opportunities to advocate their positions, to protect their interests in decision making processes, to investigate decisions on listings and setting the amounts of reimbursement, and to challenge these decisions. Son (2020) concluded that these trade agreements favour companies over governments while underscoring procedural fairness and timely access. International agreements should aim at access to affordable medicines and fairness and the accountability of companies should be discussed when negotiating trade agreements or adopting international agreements through domestic legislation.

3.10. Key Findings of Trade Agreement Analysis

Overall, there are five key findings from the above analysis of trade agreements.

i. There are limited commitments in health sector trade (both products and services) and investment in many of the agreements in Asia-Pacific and, hence, the benefits of the trade agreements for this sector are limited. Many agreements do not include clauses to ensure transparency, clarity and non-discriminatory access to government procurements for the healthcare sector, fast-track time bound approvals for trade facilitation, and scope for time-bound completion of MRAs, which are extremely important for this sector. Rigid rules-of-origin in some agreements makes it difficult for exporters to use the trade agreement.

ii. The trade agreements of countries in Asia-Pacific with the EU and the US are most comprehensive, deeper in coverage, include WTO TRIPS plus provisions, government procurement and regulatory commitments. These agreements

have the maximum coverage and depth of commitments in the health sector and have also seen maximum benefits, especially in terms of the removal of non-tariff barriers (Hoekman, 2018).

iii. South-south agreements are weak, which also indicate that developing countries and LDCs seem to open up their markets to developed countries but not to each other. This is an area that will need further attention.

iv. One of the reasons for lack of commitments may be regulatory gaps and/or unwillingness of the country to give up its regulatory space, but in some cases like Mode 3 under trade in services, countries have not even committed to autonomous liberalisation, making the trade agreement almost defunct.

Among the different sub-regions, ASEAN has taken several measures to facilitate trade, collaboration, and investment in the health sector. Other sub-regions can learn from best practices incorporated into trade agreements signed by ASEAN.

Given the above analysis on coverage of the health sector under different chapters of trade agreements in the Asia-Pacific region, the next section describes different types of collaborations and partnerships in the region.

Section 4

3. Collaborations and Partnerships in Health Sector

Across the Asia-Pacific region, there are several collaborations and partnerships between regions, countries and governments and between governments and the private sector. These collaborations at several levels (government-to-government or G2G, government-to-business or G2B, business-to-business or B2B) cover activities and partnerships between the health sector and other sectors like technology, and between the healthcare sector and academic institutions, non-government organisations (NGOs) etc. Some of these have been discussed in this section.

4.1 Initiatives of Multilateral Organisations

There are several multilateral organisations like the United Nations, WHO, WTO and ADB that provide a platform for the healthcare sector. A few examples are discussed below.

4.1.1. United Nations Agencies

The United Nations plays a core role in these forums, with several being led by United Nations-led agencies. For example, the United Nations Development Programme (UNDP) has partnered with several other international agencies such as the World Health Organization (WHO), United Nations Environment Programme (UNEP), United Nations International Children's Emergency Fund (UNICEF), and the Global Fund[75] in the healthcare sector. Figure XIII presents some country-specific examples of UNDP's partnership with Gavi, the Vaccine Alliance (Gavi).[76]

[75] https://www.undp.org/press-releases/uns-health-and-development-agencies-join-forces-good-health-all; https://www.undp.org/news/undp-partners-who-unep-and-unicef-launch-500-actions-reduce-health-burden-environmental-causes; https://www.undp-capacitydevelopment-health.org/en/about-us/partners/global-fund-partnership/ (last accessed on 21 December 2021)

[76] Gavi is an international organisation created in 2000 to improve access to new and underused vaccines for children living in the poorest countries. For more details, see https://undphealthimplementation.org/the-partnership/the-undp-gavi-partnership/about-gavi/ (last accessed on 21 December 2021)

Figure XIII: United Nations Development Programme-Gavi Partnership: Country Examples

India

- The first UNDP-Gavi partnership was in the form of a grant to the 2013-18 Gavi Health Systems Strengthening (HSS) in India. This was in partnership with the WHO and UNICEF. UNDP took $38.5 million of the grant to support the development of a national monitoring and evaluation (M&E) framework for immunisation, national research, and the roll-out of an electronic logistics management information system for vaccines. This agreement was extended to a second phase (2017-2021) to scale eVIN to the rest of the country, supported by up to an additional $40 million in funding. The grant is implemented in partnership with the Ministry of Health and Family Welfare, UNICEF and WHO.

Tajikistan

- In 2017, UNDP Tajikistan signed an initial $1.4 million agreement with Gavi for health infrastructure support, which was extended until December 2022. By 2019, UNDP built 10 new medical centres and rehabilitated six centres, in partnership with WHO and UNICEF. UNDP also has provisions for non-medical equipment and establishment of mobile services at health facilities, along with training of health staff.

Indonesia

- In 2018, UNDP Indonesia supported the Ministry of Health to guide the Sistem Monitoring Imunisasi Logistik secara Elektronic (SMILE), an electronic logistics management information system. Following its success, in 2019, UNDP signed another agreement with Gavi worth $12 million to support SMILE's scale up.

Source: Extracted from https://undphealthimplementation.org/the-partnership/the-undp-gavi-partnership/about-the-undp-gavi-partnership/ (last accessed on 22 December 2021)

4.1.2. World Health Organization

The WHO supports several international forums for discussions on health and healthcare sector. One such example is the Asia-Pacific Parliamentarian Forum on Global Health, which conducts an annual event for parliamentarians to discuss ideas, strengthen capacity and foster collaboration in sustainable health actions. Countries such as Australia, Cambodia, New Zealand, Fiji, Solomon Islands and Viet Nam

participate in these forums.[77] Another example is the Health Futures Forum, which is organised by the Western Pacific regional office of the WHO.

4.1.3. World Trade Organization and Regional Initiatives

The WTO was a core forum for setting up trade in goods and services, IPR issues, etc. However, when the WTO Doha negotiations stalled, it led to a proliferation of trade agreements. Nevertheless, the role of the WTO cannot be undermined. With the post-pandemic shortage of drugs and vaccines and growing protectionism, WTO has emerged as an internationally important forum to address healthcare concerns such as vaccines. Countries like India submit various proposals on IPR. For example, as mentioned earlier, India and South Africa initiated a campaign to temporarily waive IP protection on coronavirus vaccines.[78]

4.1.4. World Bank

The World Bank, the WHO and other United Nations organisations, are working together in East Asia and Pacific countries to mitigate the health situation arising from the COVID-19 pandemic. Outcome-based funding or DLI (disbursement-linked indicators) models have been initiated where financing is provided only when verifiable milestones have been achieved. DLIs increase access to vaccines, improving nutrition, providing access to healthcare services in remote villages and combating NCDs in countries like Lao PDR, Cambodia, Samoa, and Indonesia.[79]

4.1.5. Asian Development Bank

The ADB is a major player in healthcare in Asia. Being an important organisation in Asia, the ADB is committed to improving health in the region. For example, to tackle COVID-19, ADB committed a $20-billion package in April 2020 in a mix of loans, grants, technical assurance, and debt security for identified projects across nations

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77 https://www.who.int/westernpacific/about/partnerships/regional-health-initiatives/asia-pacific-parliamentarian-forum-on-global-health (last accessed on 21 December 2021)

78 https://www.nature.com/articles/d41586-021-01242-1 (last accessed on 10 January 2022)

79 https://www.worldbank.org/en/topic/health/brief/working-towards-universal-health-coverage-in-east-asia-and-the-pacific 10-Dec-2021 (last accessed on 25 January 2022)

and regions in Central, East and West Asia, South East Asia, South Asia and the Pacific that includes a $9-billion vaccination package.[80]

4.2 Regional Initiatives

There are various initiatives across the five sub-regions in Asia-Pacific (see section 3). These forums vary across the regions and cover a multitude of activities related to the health sector, ranging from parliamentary forums for policy makers, to forums for collaborations between healthcare equipment and technology firms. There are designated platforms within regional organisations that include health in their manifesto. The ASEAN Health Cooperation and the Health and Population Activities in SAARC are two such examples.

4.2.1. Association of Southeast Asian Nations

The ASEAN Health Cooperation's governing structure is composed of two main governing ASEAN health development bodies, the ASEAN Health Ministers' Meeting (AHMM) and Senior Officials' Meeting on Health Development (SOHMD). While AHMM determines the health policies of ASEAN and endorses decisions and reports of SOHMD, the latter is responsible for strategic management of and guidance for the implementation of the ASEAN Health Development Agenda (APHDA), which aims to promote a healthy ASEAN community where people achieve maximum health potential.[81]

4.2.2. South Asian Association of Regional Cooperation

Unlike ASEAN, SAARC does not have a separate designated platform for discussions on health, though it regularly conducts Health Ministerial Meetings, such as the Emergency Meeting of SAARC Health Ministers in Maldives, April 2003, to develop a strategy to deal with the then epidemic of severe acute respiratory syndrome

[80] https://www.adb.org/news/adb-triples-covid-19-response-package-20-billion (last accessed on 10 December 2021)
[81] https://aseanphe.org/about-phe/asean-health-cooperation/ (last accessed on 26 January 2022)

(SARS).[82] In 2020, SAARC countries collaborated to leverage regional experience to tackle the COVID-19 pandemic (see Box 8).

4.3 Government to Government Partnerships

Collaboration between governments happen through trade agreements such as the RCEP or regional agreements through regional bodies like ASEAN and SAARC or through MRAs (Mutual Recognition Agreements) or MOUs.

4.3.1 Mutual Recognition Agreements

MRAs can cover both healthcare products and services. It can cover a wide range of issues from simplifying approval, inspection, and certification processes for pharmaceuticals to recognition of degrees of medical practitioners. More recently, its scope has been widened to mutual acceptance of vaccine certificates (see Table 7 for some examples). Table 7 shows that there is limited information of MRAs online. Signing an MRA does not mean that it will be implemented; some MRAs have a long implementation period as there is no provision for time-bound completion of the MRAs. For example, in the India-United Arab Emirates CECA, which was signed on 18 February 2022, and became operational on 1 May 2022,[83] both countries proposed to have MRAs in medical (doctors) services, dental services, nursing services, and veterinary services within a reasonable period of time with no deadline to start negotiations or conclude these MRAs. However, in the India-Australia Economic Cooperation and Trade Agreement (ECTA), Interim Agreement, signed on 2 April 2022, and expected to come into force by the end of May 2022,[84] both countries proposed to have MRAs in medical (doctors) services, dental services, nursing services, and veterinary services within one year of the implementation of the agreement. While developing countries like India ask for MRAs in their trade agreements, they do not push for time bound completion of the negotiations. Some developed countries want time bound completion and implementation of MRAs.

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82 https://www.saarc-sec.org/index.php/areas-of-cooperation/social-affairs (last accessed on 26 January 2022)

83 The text of the agreement is available at Ministry of Commerce, Government of India, https://commerce.gov.in/international-trade/trade-agreements/comprehensive-economic-partnership-agreement-between-the-government-of-the-republic-of-india-and-the-government-of-the-united-arab-emirates-uae/

84 The text of the agreement is available at https://www.dfat.gov.au/trade/agreements/negotiations/aifta/australia-india-comprehensive-economic-cooperation-agreement

Table 7: Examples of Healthcare Mutual Recognition Agreements signed with UNESCAP Member States

Participating Countries/ Unions	Signing Year	Implementation Year	Coverage	Objective	Status
Turkey with EFTA Countries (Norway, Sweden, Iceland, Austria, Portugal, Denmark, Switzerland, UK and Liechtenstein)	1991	1992	– Medical devices – Gas appliances – Marine equipment – Explosives for civil uses – Radio and telecommunications terminal equipment	The MRA covers a broad range of areas including tariff reductions, rules of origin, public procurement, state aid, intellectual property rights and technical regulations.	N.A.
European Union with Australia & New Zealand	1999	1999	– Human chemical pharmaceuticals – Medicinal gases – Human biologicals, including vaccines, immunologicals and biotherapeutics – Human radiopharmaceuticals	MRAs allow EU authorities and their counterparts to (a) rely on each other's GMP inspection system (b) share information on inspections and quality defects and (c) waive batch testing of products on import into their territories.	In operation since: 1 January 1999 for human medicines
Canada and Australia	2000	2006	– Human pharmaceuticals such as prescription and non-prescription medicines/drugs and medical gases – Human biologicals including vaccines, immunologicals, and biotherapeutics – Human radiopharmaceuticals	To facilitate market access and encourage greater international harmonisation of compliance standards while protecting consumer safety	As of 1 November 2018, Health Canada accepts GMP Certificates of Compliance issued by the TGA for APIs fabricated/manufactured in Australia as evidence of compliance to GMP.

Participating Countries/ Unions	Signing Year	Implementation Year	Coverage	Objective	Status
European Union with Australia and New Zealand	2001	2001	– Veterinary immunological, including vaccines, immunological and biotherapeutics – Premixes for preparation of veterinary medicated feedstuff – Veterinary chemical pharmaceuticals	MRAs allow EU authorities and counterparts to (a) rely on each other's GMP inspection system (b) share information on inspections and quality defects and (c) waive batch testing of products on import into their territories.	In operation since 1 June 2001 for veterinary medicines.
ASEAN MRA on Nursing Services	2003	2006	– Professional nursing services – Mobility of nurses – Capacity building and training of nurses – Exchange of information and expertise of standards and qualifications	Free movement of healthcare professionals such as nurses in ASEAN	N.A
ASEAN MRA on Dental and Medical Practitioners	2003	2009	– Mobility of dental and medical practitioners – Capacity building and training of dental and medical practitioners – Exchange of information and expertise on standards and qualifications	Free movement of healthcare professionals such as dental and medical practitioners in ASEAN	N.A.

Participating Countries/ Unions	Signing Year	Implementation Year	Coverage	Objective	Status
European Union with Japan	2004	Updated in 2018	– Chemical pharmaceuticals – Homeopathic medicinal products if classified as medicinal products and subject to GMP requirements in Japan – Vitamins, minerals and herbal medicines if classified as medicines in both the parties	MRAs allow EU authorities and counterparts to (a) rely on each other's GMP inspection system (b) share information on inspections and quality defects and (c) waive batch testing of products on import into their territories.	N.A.
India-Singapore MRA on Nursing Services	2018	2018	– Mobility of nurses – Recognition of degree	To establish mutual recognition and facilitate the mobility of registered nurses between India and Singapore	N.A.
Canada and UK	2020	2021	– Human pharmaceuticals including prescription and non-prescription medicinal products or drugs, and medicinal gases – Products intended for use in clinical trials or investigational medicinal products; manufactured by the manufacturers holding a manufacturing authorisation or establishment licence – Human biologicals including immunological and biotherapeutics	To reduce the number of duplicative visits and certification requirements faced by pharmaceutical manufacturers that sell their product in both Canada and the United Kingdom.	As of 1 April 2021, Canada and the UK will continue to recognise Certificates of GMP Compliance issued by each country's regulatory agencies and will continue to accept batch testing certificates issued by a manufacturer without

Participating Countries/ Unions	Signing Year	Implementation Year	Coverage	Objective	Status
			– Human radiopharmaceuticals		re-control of that batch at import.
India with Nepal; Armenia; Mauritius; Mongolia; Belarus; Lebanon; Israel; Ukraine; Serbia; Kyrgyzstan; Palestine France; Germany; Belgium; Hungary; Estonia; and the UK	2021	2021	– Mutual acceptance of COVID vaccination certificates	To facilitate travel within different countries, and simplify the procedure and remove the need for a 14-day quarantine in the travelling countries.	Valid as of 17 February 2022
India and Australia	2021	2021	– Acceptance of Bharat Biotech-manufactured Covaxin by Australia	To facilitate travel between countries.	Valid as of 17 February 2022

Note: N.A – Not Available

Source: Compiled by Authors from Various Sources. Available at https://www.ema.europa.eu/en/human-regulatory/research-development/compliance/good-manufacturing-practice/mutual-recognition-agreements-mra; https://www.canada.ca/en/health-canada/services/drugs-health-products/compliance-enforcement/international/mutual-recognition-agreements/updates/mutual-recognition-agreement-canada-australia.html; https://www.ema.europa.eu/en/human-regulatory/research-development/compliance/good-manufacturing-practice/mutual-recognition-agreements-mra; https://www.canada.ca/en/health-canada/services/drugs-health-products/compliance-enforcement/international/mutual-recognition-agreements/updates/mutual-recognition-agreement-canada-united-kingdom.html#a4; https://www.mea.gov.in/Mutual-recognition-Covid-vaccination-certificates.htm; https://www.mea.gov.in/Mutual-recognition-Covid-vaccination-certificates.htm (last accessed on 14 March 2022)

MRAs can be part of a trade agreement or can be a separate bilateral/regional agreement. In the 1990s, MRAs were mainly in health products (goods) such as pharmaceutical products, veterinary pharmaceuticals, vaccines, gases, etc. The MRAs in health products aim to facilitate market access through harmonisation of compliance standards. The MRAs clearly explain the standards and quality controls such as inspection and certification of health products and designated laboratories and inspection bodies. Many Asia-Pacific countries have MRAs in health products. For example, Australia and New Zealand have MRAs with the EU, which help facilitate trade by reducing duplication of inspections, which helped Australia and New Zealand manufactures reduce costs.

Some of Asia-Pacific trade agreements have provisions for regulatory commitments such as mutual recognition of qualifications and degree accreditation of health professionals (such as doctors, nurses, etc.). For example, MRA in nursing was a part of the India-Singapore Comprehensive Economic Cooperation Agreement (CECA) (mentioned in Chapter 7: Trade in Services), signed in June 2005. In 2018, an MRA in nursing was signed between the Indian Nursing Council and the Singapore Nursing Board. The MRA recognised seven nursing institutions in India and four in Singapore,[85] although the implementation period is long.

At the regional level, there are MRAs in nursing (2006), dental and medical practitioners (2009) in the ASEAN. The main objective of these MRAs is to facilitate intra-regional mobility of health workers, to exchange expertise and information regarding qualifications and standards, to promote the adoption of best practices, and to provide opportunities for professional training and capacity building in the prioritised occupations (Mendoza and Sugiyarto, 2017). Studies show that the ASEAN MRAs on nursing services have resulted in free mobility of nurses within ASEAN. In 2013, almost 5,400 nurses from ASEAN were registered from ASEAN in Singapore (Fukunaga, 2015). ASEAN countries also incorporate MRA principles into national legislative frameworks. For example, Brunei Darussalam amended laws governing the Nursing Board in 2014; Myanmar created its Dental Council Law in 2011 and Nurse

[85] Extracted from Indian Nursing Council, available at https://indiannursingcouncil.org/uploads/pdf/160017236685340032 45f60b14e8d7c1.Pdf (last accessed 6 June 2022)

and Midwifery Council Law in 2015; Singapore revised its Dental Registration Act in 2009, the Nurses and Midwives Act in 2012, and the Medical Registration Act in 2014 (Mendoza and Sugiyarto, 2017).

Some regional blocs in Asia-Pacific like SAARC do not have any MRAs. Further, an analysis of the MRAs across countries show that only a few Asia-Pacific countries have successfully entered into MRAs in goods and services, and there is limited information on their operationalisation and status (see Table 7). Besides, the number of MRAs is far less than the number of trade agreements in this region.

4.3.2 Memorandums of Understanding

MOUs are bilateral cooperation agreements between nations and, through a broad outline, express a convergence of will and an intended course of action. These are less contractually binding than MRAs; they show intent but do not have binding commitments. While G2G MOUs are prevalent, there have been MOUs between government and industry (G2B), between industry, between industry bodies and NGOs, between government and NGOs, etc., to address various issues like access to healthcare and to leverage innovation and digital technologies to provide inclusive access to healthcare systems and outcomes.

Table 8: Examples of Healthcare Memoranda of Understandings signed with UNESCAP Member States

Participating Countries/ Organisations	MoU	Signed on	Objectives
A. Government to Government			
Ministry of Science and Technology, India, and Ministry of Science and ICT, Republic of Korea	MoU on cooperation in the field of biotechnology and bio-economics	July 2018	For cooperation in adoption of biotechnology and bio big-data in health, medicine, agro fishery products, digital healthcare, precision medicine, brain research, and next generation-medical equipment.
Ministry of Technology, Ministry of Commerce	MoU on Future Strategy Group	July 2018	For cooperation in of cutting-edge technologies to reap the benefits of the 4th Industrial revolution by commercialising

Participating Countries/ Organisations	MoU	Signed on	Objectives
and Industry, India, and Ministry of Trade and Industry, Ministry of Science and ICT, Republic of Korea			these. Thrust areas include affordable healthcare for the elderly and disabled.
Ministry of Health & Family Welfare, India, and Department of Health and Human Services, US	MoU for cooperation on International Centre of Excellence in Research (ICER)	September 2021	To collaborate in reforming the global health architecture, whose fault lines have become amply visible during the current pandemic, and in managing health emergencies, supporting digital health and innovation, mental health interventions, conducting research and establishing production facilities related to diagnostics, therapeutics and, vaccines.
B. Government to Private Organisations			
Asian Development Bank and Japan International Cooperation Agency, Japan	MoU to strengthen health security for an aging Asia-Pacific	May 2017	To establish a strategic partnership to strengthen health security and promote universal health coverage (UHC)
Ministry of Health, Viet Nam, and Novartis, Switzerland	MoU to strengthen primary healthcare	December 2019	To strengthen and deliver high-quality primary healthcare services close to home
Thailand Centre of Excellence for Life Sciences (TCELS) and VNU Asia Pacific	MoU to Strengthen cooperation in life sciences, biotechnology and healthcare	August 2020	To strengthen cooperation by revamping the brand Bio Investment Asia to Bio Asia Pacific focusing on life sciences, biotechnology and healthcare industries.

Participating Countries/ Organisations	MoU	Signed on	Objectives
National Healthcare Group (NHG), Singapore, and Holmusk Company, Singapore	MoU to jointly develop innovative solutions for mental healthcare	January 2021	To improve mental health and wellbeing of the population of Singapore by using mental health related bio-markers
AstraZeneca, Ministry of Health, Singapore, and Ministry of Health, Sweden	MoU for innovation projects in healthcare	November 2021	To pilot data and artificial intelligence projects to drive healthcare improvements
C. Private to Private Organisation			
Microsoft, Singapore, and Fullerton Healthcare Corporation Limited, Singapore	MoU to integrate healthcare delivery and improve patient experience	October 2015	To bring together their respective capabilities and resources to advance the delivery of healthcare and improving overall patient experience through technology and innovation
Columbia Pacific Communities, India, and Columbia Asia Hospitals, India, Malaysia, Viet Nam and Indonesia	MoU to provide expertise in designing of healthcare and wellness centres and provide protocol at Columbia Pacific Communities	September 2019	To redefine senior living in the country by taking care of their overall wellbeing and health and to make it convenient and easily accessible to residents in communities.
Pacific Community and Australasian College for Emergency Medicine (ACEM), Australia	MoU for capacity building and mentoring of Pacific physicians.	November 2019	To provide emergency medical training and education, pre-hospital care and providing expertise in the development of emergency care systems.

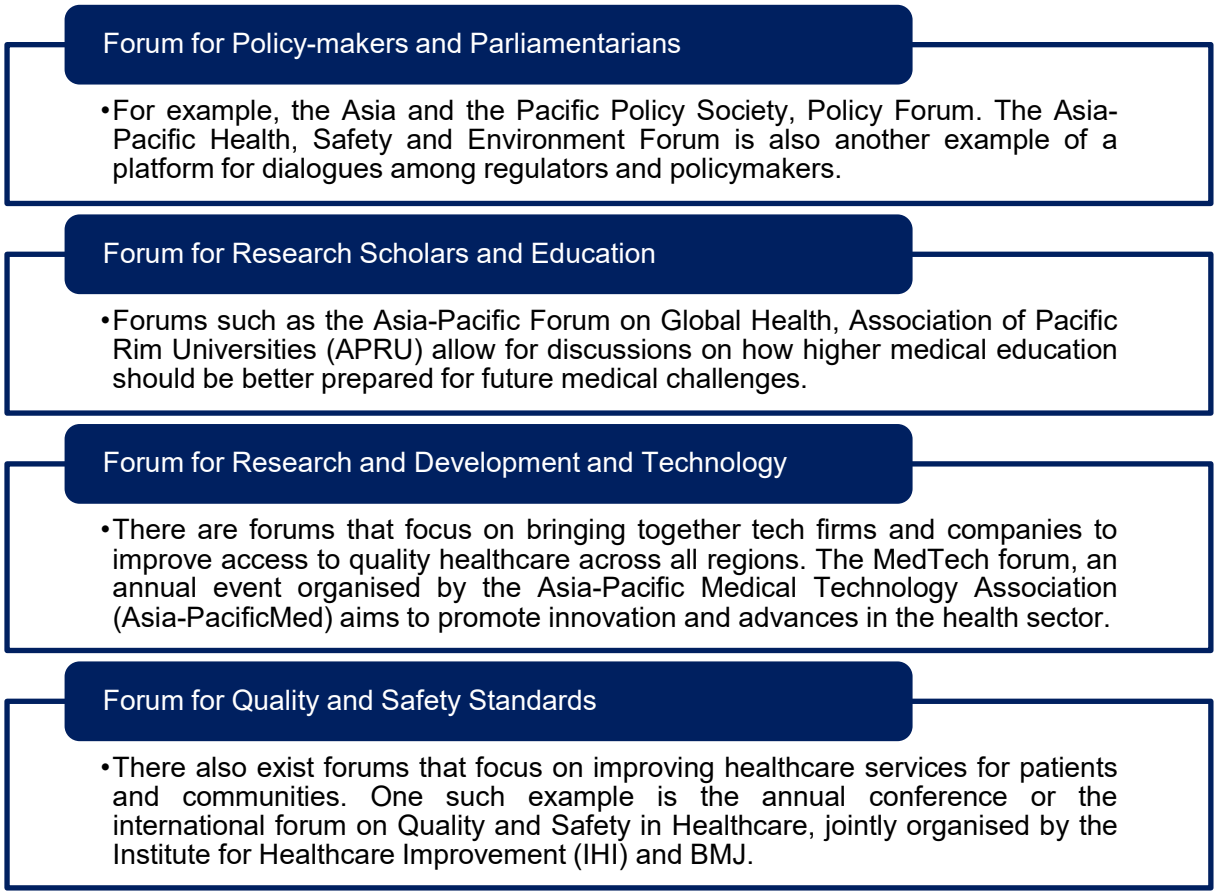
Participating Countries/ Organisations	MoU	Signed on	Objectives
NATHEALTH, India, and Asia-Pacific Medical Technology (Asia-PacificMed)	MoU to harness the role of the medical technology industry in India	September 2020	To enable a seamless pathway that streamlines all innovations in MedTech and ensures that it scales and increases concerted efforts by both organisations.

Source: Compiled by Authors from Various Sources

4.4 Examples of Cross-country Forums in Asia-Pacific

There are several forums that provide a platform for discussion specifically for policymakers, businesses and other stakeholders belonging to countries in the Asia-Pacific region. Some of these examples are presented in Figure XIV. There are also region-specific forums such as the North-East Asia Development Cooperation Forum or the East Asia Forum to discuss development cooperation in the health sector. These forums, together, target health at different levels and address a multitude of activities ranging from providing healthcare, healthcare equipment and R&D to parliamentary forums for policy makers.

Figure XIV: Types of Forums Targeting Healthcare



4.5 Private Sector Engagements and Collaborations within Countries and Cross-border

Within the private sector, there are four types of collaborations – (1) private sector with the government, (2) the private sector with the private sector (3) private sector with other institutions such as R&D institutions and academic institutes and (4) all these stakeholders as part of a collaborative model. Such partnerships can be within a country or cross-border.

4.5.1. Within Country Partnerships

Within a country, private sector engagements and collaborations with the government can be at different levels – central/federal, state/provincial and local levels. The private sector can help mitigate government funding shortages; they often bring in new technology and best management practices. They can support governments in the use of technology for remote healthcare through investments in hospitals and

diagnostics centres, collection and analysis of patient data, administration of drugs and vaccinations, to name a few. With a growing ageing population and the recent pandemic, the size of the home healthcare market[86] in Asia-Pacific is expected to grow at a CAGR of around 12.5 percent between 2021 and 2026.[87] In this segment, the scope for private sector involvement is extensive and they can participate in areas like screening, diagnostics, mobility and therapeutic services, devices for telemedicine and telehealth, services from basic nursing, transfusion and palliative care to skilled nursing and rehabilitation services, and development of software like mobile applications, agency management, clinical management and hospice solutions. Prominent players in this market are General Electric (GE) Company, Koninklijke Philips N.V and Abbot Laboratories.

In many countries in the region, social innovation[88] can help enhance the quality of life. For example, India's Centre for Development of Advanced Computing (CDAC, a not-for-profit organisation) developed the MOSQUIT surveillance system to address the challenges that the Indian system faces in monitoring and managing malaria, especially in rural areas. The key outcome is to measure the effectiveness of anti-malarial interventions in real time across multiple areas like stock of malaria kits, the number of infections in the community, and with an integrated platform, provide a quick health system response. This is now being expanded to the wider public health system as well as to other diseases like tuberculosis and can also be replicated in other countries to monitor health-related challenges in rural areas.

Another example is that of the Philippines, which can be replicated in other nations. The country has the largest incidence of new leprosy cases detected over the past decade. Even with elimination status when counting the entire population, there are pockets of incidence that fail to meet the elimination criteria, especially in the Northern Luzon area.[89] Partners in Leprosy Action (PILA) is a strategy implemented by the Philippines Leprosy Mission (PLM, a non-government organisation), to create

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86 Home healthcare provides economic post-hospitalisation care to patients.

87 https://www.marketdataforecast.com/market-reports/asia-pacific-home-healthcare-market (last accessed on 10 December 2021)

88 Social innovation delivers new approaches that are inclusive, affordable and effective in solving real-world problems and is scalable and sustainable. It caters to the needs and expectations of receivers of healthcare services and is transformational for health delivery and systems (van Niekerk, et al., 2017). The intended outcome of social innovation is enhanced quality of life, access and equity for all members of society.

89 https://www.who.int/tdr/news/2017/partners-leprosy-action/en/ (last accessed on 26 January 2022)

awareness, provide resources and care for leprosy affected patients and to reduce the stigma associated with the disease.[90] PILA use the education system to spread awareness among children and spread this to family members, and uses its network and connections with the health system to provide relief and bring the issue to the forefront.

However, in engaging the private sector, ensuring equal access and quality of services to the bottom of the pyramid is a challenge for many governments as private companies are often driven by the profit motive. This requires innovative policies. In India, Section 135 of the Companies Act 2013 mandates that companies with specific turnover and profits must spend at least 2 percent of their average net profits from the previous three years in corporate social responsibility (CSR) activities and healthcare has been a key sector supported either directly by the companies or through NGOs. The Public Health Foundation of India (PHI), an NGO, created a CSR fund that[91] supported both development and research activities in the area of preventive healthcare. This has led to the greater engagement of the private sector in healthcare.

In fact, domestic policies and regulations play a crucial role in enhancing private sector participation and engagement. Several Asia-Pacific countries have come up with national level legislation to align with SDGs and achieve UHC. In many countries, the private sector is actively engaged in such initiatives, but private companies also want to be profitable. This can only happen when there is a conducive political, regulatory, and strategic economic climate that creates opportunities for the private sector and, at the same time, ensures that healthcare is made accessible to all.

4.5.2. Models of Partnership between Private Sector (Domestic and Foreign), Governments and Multinational Bodies

Cross-border partnerships of the private sector can follow three types of models, namely; (1) public private partnership (PPP) (2) private-to-private partnerships and (3) contribution of non-government organisations (NGOs) and grant-funded

[90] https://leprosy.org.ph/what-we-do/pil/ (last accessed on 26 January 2022)
[91] https://phfi.org/focus-your-csr-on-preventive-healthcare/ (last accessed on 11 December 2021)

organisations. These three models of partnership between the private sector, government and other bodies are discussed below.

Box 5: Private Sector Contribution during COVID-19

Private sector played a key role in supporting governments to address healthcare needs related to the COVID-19 pandemic. Many companies have been providing ventilators, PPE kits, gloves, face shields and surgical masks across countries like India, the Philippines and Malaysia.

(a) Public-Private Partnership

A number of countries have roped in multilateral organisations and private players in a PPP kind of model to ensure the dual objective of profits and access to "social good". For example, in 2019, Bangladesh signed an MoU with the ADB to promote PPP projects in the healthcare sector.[92] Bangladesh has had remarkable success in public health, especially with their immunisation programmes that reduced infant and maternal mortality.

These PPPs differ from traditional government contracts,[93] which were solely government funded. Governments can deploy PPP models[94] which can be deployed for different purposes like financing (joint, part or full financing of the project); designing care delivery and infrastructure; building and maintaining facilities; equipment and infrastructure; and delivering contracted outcomes in areas like supply of equipment, delivery of care services, IT, and management expertise. A majority of the PPPs bundle these functions into either infrastructure services, clinical services or integrated services that comprehensively cover infrastructure and service delivery (PwC, 2020). While most PPPs in the Asia-Pacific region now focus on areas like in-patient care, ancillary services like diagnostics, emergency and specialist care, studies (International Finance Corporation (IFC) and Wadhwani Initiative for Sustainable Healthcare (WISH), 2013, and Abuzaineh et al., 2018) show that future opportunities lie in expanding the PPP models to preventive care, primary care and in areas like rehabilitation, skilling of

92 https://www.pppo.gov.bd/events2019_bangladesh-partners-with-adb-to-implement-public-private-partnership-projects-in-healthcare-sector.php (last accessed on 7 December 2021)

93 https://www.cii.in/webcms/Upload/Whitepaper%20on%20Partnership%20in%20Healthcare1.pdf (last accessed on 8 December 2021)

94 https://www.pwc.com/gx/en/industries/healthcare/publications/trends-for-the-future.html (last accessed on 8 December 2021)

healthcare workers like nurses, etc. With growing private sector interest and the need to supplement government budgets and initiatives, the PPPs have to be carefully designed.

Since these engagements are of long duration, with inherent financing, operating and regulatory risks, the dialogue mechanisms are typically principle oriented. The fundamental assumption is that regulation, policies, and a qualified private sector market exist to ensure a competitive process. The key principles presented in Figure XV need to be agreed upon. The dialogue mechanisms must ensure convergence of principles and action to foster competitive and high-quality participation by the private sector in public health.

Figure XV: Some Key Principles of Successful Public-Private Partnerships

Source: PwC (2020)

(b) Private to Private Partnerships

Private-to-private partnerships can help improve the quality of healthcare provided to a larger section of society. One such example is Parkway Pantai Limited's Gleneagles Global Hospitals. Parkway Pantai Limited is one of the largest integrated healthcare groups operating in Asia. The Singapore-based medical company has collaborated with other private healthcare groups across Asia, and operates in Singapore, Malaysia, India, China and United Arab Emirates. In Singapore, Parkway Pantai is the largest private healthcare provider. In Malaysia, it is the second largest private

healthcare provider, and in India, it has a network of 10 hospitals in the key metropolitan cities of Chennai, Bangalore, Hyderabad, Kolkata and Mumbai.[95]

These collaborations also help with improved and better research/manufacturing and production of drugs and medical goods, as they often have the required funds and facilities, and help governments cover the gaps in the sector. The development of the COVID-19 vaccine by the University of Oxford, UK, and the Serum Institute of India is one such example. The University of Oxford, UK, and the Serum Institute of India partnered for the production and manufacture of COVID-19 vaccine. The Serum Institute was in charge of manufacturing the vaccine developed by Oxford University and AstraZeneca. Furthering the collaboration, the vaccines were distributed to the world via the COVAX initiative[96] in partnership with WHO and Gavi.[97]

(c) Contribution of NGOs and Grant Funded Organisations

Several NGOs and grant funded organisations have contributed to social innovation in healthcare in the Asia-Pacific region to enhance delivery capacity, using data-based decision making and learning systems and re-imagining the role of the community in delivering healthcare services. Today, there is a strong overlap between social innovation and technology in healthcare, which is discussed in the next section (see section 4.7). Innovation is the key to delivering accelerated healthcare solutions to meet SDG-3 goals through SDG-17 interventions. This includes the following:

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95 https://www.gleneaglesglobalhospitals.com/about-parkway-pantai?msclkid=7a05ed48d05911eca7f3942fd3dc28d4 (last accessed on 10 May 2022)

96 COVAX is the vaccines pillar of the Access to COVID-19 Tools (ACT) Accelerator, a global collaboration aimed to accelerate the production and access to COVID-19 tests, treatments, and vaccines. For more details, see https://unric.org/en/what-is-covax/?msclkid=0e366a76d05d11ecb7fc4cee734222c9 (last accessed on 10 May 2022)

97 https://www.gov.uk/government/news/uk-and-india-to-accelerate-collaboration-on-vaccines-to-prevent-future-pandemics?ms clkid=51941c2ad05711ecb8d70535c42ae2f0 (last accessed on 10 May 2022)

Use of technology/innovation through manufacturers, software firms, systems integrators

Local interventions that solve local problems, mostly addressed by grant funded organisations

Social innovation to improve service delivery and safety

Research and Development to identify opportunities and solutions for universal health coverage

Organisations like the Bill and Melinda Gates foundation[98] source funding from affluent East Asian countries in the region and acquire resources for healthcare programmes in developing and LDCs. In the Asian region, the foundation collaborates with the private and the public sectors in Japan, the Republic of Korea, China and India. The foundation has global programmes against diseases like polio, AIDS, tuberculosis and malaria, and a global vaccine alliance that saves lives. The foundation also works with private sector innovators to develop new tools and treatments and leverages advanced technology and manufacturing capacities of East Asian countries to eliminate infectious diseases.[99]

4.6 Data, Technology and Healthcare Collaborations

According to McKinsey and Company (2021), Asia is at the cusp of a digital healthcare revolution – over 1 billion lives have been already affected by digital health in 2020. Collectively, digital health in Asia could create $100 billon in value by 2025 from the $37 billion in 2020. According to another study, the digital health market in Asia-Pacific was valued at $11.2 billion in 2020 and it is expected to grow at a CAGR of 29.2 percent during the period 2021 to 2026, primarily due to the success of digital services, application development and demand for smart equipment during the COVID-19 pandemic.[100] Studies also confirm that technology will become ubiquitous with the widespread use of wearables for fitness as well as for monitoring, GPS-driven data gathering and neurological monitors. Health analytics and Electronic Medical Records

[98] www.gatesfoundation.org (last accessed on 10 December 2021)
[99] https://www.gatesfoundation.org/our-work/places/east-asia (last accessed on 10 December 2021)
[100] https://www.marketdataforecast.com/market-reports/asia-pacific-digital-health-market (last accessed on 10 December 2021)

(EMR)/Electronic Health Records (EHR) systems along with growing use of fourth industrial revolution technologies like AR (augmented reality) and AI (artificial intelligence) will significantly drive the next level of changes for achieving universal health coverage. Given this development of technology, doctors and medical practitioners should be trained in healthcare technologies and this is a key area for private sector engagement in many developing countries and LDCs.

The need for technology-driven healthcare services in Asia is a combination of demand-side factors (ageing population, pandemic after effects), supply side factors (low doctor to population ratio, and global supply requirement of over 9 million nurses, many of whom are in Asian countries, non-reduction in labour-intensive care delivery models), rising consumer expectations (increased consumer spending on healthcare products and nutrition), growing financial burden of healthcare and limited financial control mechanisms, and technological innovation (over half of the world's internet users live in Asia, which leads digital innovation in several sectors, and has a vibrant venture capital ecosystem with 44 percent of the world's private equity investment in digital health and start-up ecosystem in the region).

Box 6: MedTech and COVID-19 in Asia-Pacific

In most Asia-Pacific countries, the medical technology industry has supported governments during the COVID-19 pandemic through R&D, innovation, and access to technology. It has also helped governments react to rapidly changing scenarios and ensured that frontline workers and backend teams and patients are able to diagnose, treat and manage the virus.

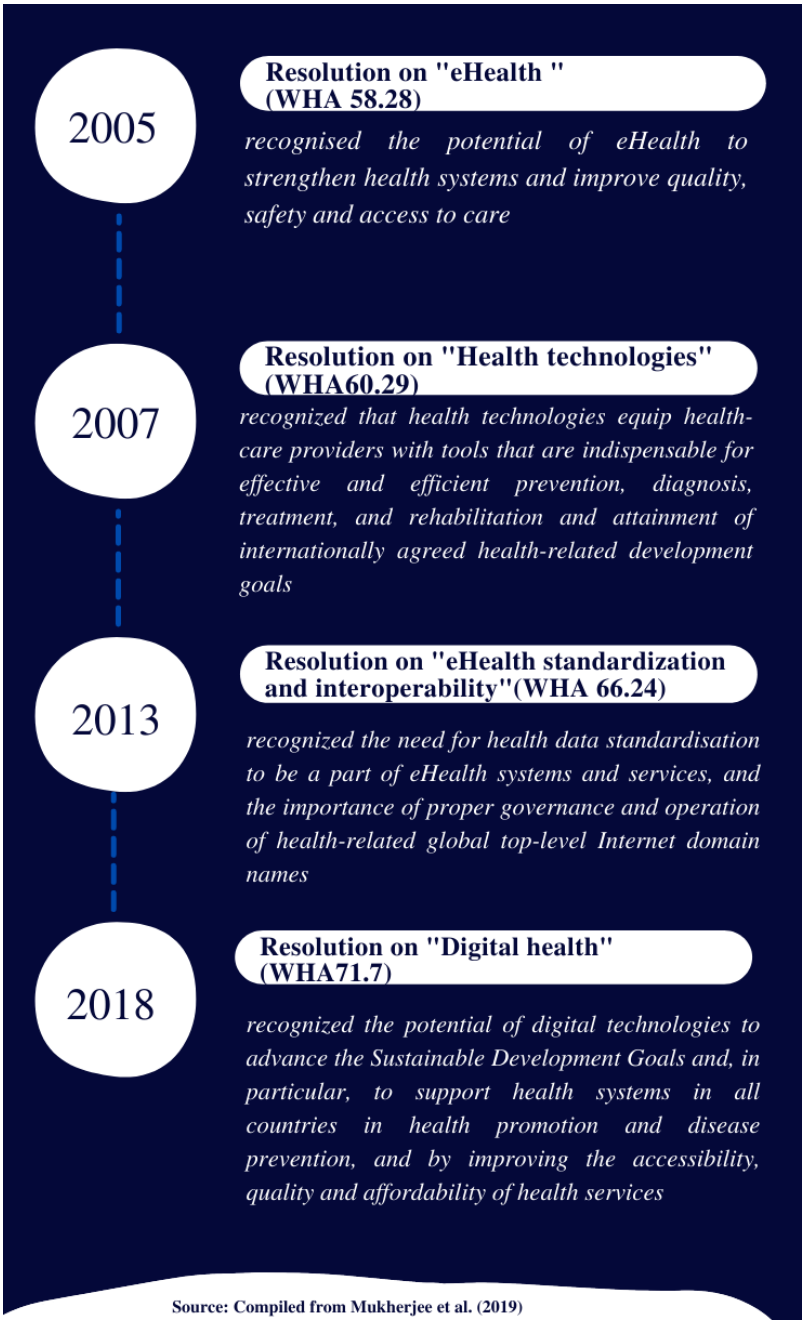
Since 2019,[101] there has been significant policy interventions across many developing countries in the region (for example, Malaysia and Viet Nam) in the rollout of EMRs and EHRs. Thailand's digital journey has begun with the Thailand National Digital Healthcare Workforce Development Initiative (WDI) to address the needs of patients through digital healthcare and support for medical tourism, which is a key economic driver. Inaugurated in 2019, the initiative will focus on elevating digital competency in Thailand's healthcare workforce through the adoption of healthcare

[101] https://www.healthcareitnews.com/news/asia/hit-related-developments-apac-2019-overview (last accessed on 11 December 2021)

IT certifications.[102] Singapore has identified the need for “good data streams” since the use of advanced AI technologies cannot happen in a vacuum. In countries like Bangladesh, the government strongly supports digitalisation and the use of technology to address healthcare gaps.

[102] https://www.healthcareitnews.com/news/asia/himss-thailand-national-digital-healthcare-workforce-development-initiative-launched (last accessed on 26 January 2022)

Figure XVI: Examples of World Health Organization's Resolutions for Technology in healthcare



Patient data has always been important for drug and vaccine research and for reducing the spread of diseases. For example, Singapore has the National Electronic Health Record (NEHR) programme, which provides a common access point for medical information for its entire population.[103] While the process of data collection has been robust in many of the region's developed countries, developing countries and LDCs are lagging. To emphasise the importance of technology in healthcare, WHO has come out with several resolutions across the years to optimise the potential of technology in healthcare and for countries to ensure that digital health solutions complement and enhance existing health services (Mukherjee et al., 2019).

[103] https://www.hhmglobal.com/knowledge-bank/articles/singapores-journey-to-build-a-national-electronic-health-record-system (last accessed on 13 January 2022)

At the same time, patient data is considered to be highly sensitive, and many countries have come up with sector specific regulations or rigid data sharing conditions, which often make it difficult to use such data for innovation and new product development. Thus, data privacy vis-à-vis data sharing has been a core issue of debate in the healthcare sector. In this context, it is important to note that at the onset of the coronavirus pandemic, many countries in Asia-Pacific relaxed their data-sharing policies in an attempt to curb disease transmission. As the disease spread through personal contact, there was a need to monitor individuals for contact tracing and for monitoring patients (Mukherjee et al., 2020). Several countries, with stringent data sharing laws earlier, facilitated data sharing through additional provisions or amendments in their policies. See Table 9 for examples.

Table 9: Policies to Allow Data Sharing during COVID-19

Country	Data Localisation Policy	Pandemic/Disaster Management Policy	Health Policy
Australia	✓	✓	✓
India	×	×	×
Indonesia	×	✓	✓
Republic of Korea	✓	✓	×
United States	×	×	✓

Source: Mukherjee et al, (2020)

The example of the Republic of Korea illustrated in Box 8 (in Section 5) shows that some countries have made amendments in their disaster management regulations to facilitate data sharing.

Section 5

5. COVID-19 and Healthcare Sector in Asia-Pacific

With the outbreak of the COVID-19 pandemic, the Asia-Pacific region, accounting for over half the total global population, faced severe supply chain and healthcare disruptions. The pandemic highlighted the infrastructure gaps, lack of healthcare resources and funding across countries in the region. It created a greater need for trade liberalisation, cross-border investment and collaboration in healthcare to mitigate shortages of essential medicines, medical devices, vaccines and healthcare workers, and for sharing information and data to address the spread of the disease. It also brought forward the need for collaboration and partnerships between technology companies, governments, and the healthcare sector – within countries, within sub-regions and across countries and sub-regions – to help countries, especially developing countries and LDCs, recover from the pandemic.

At the start of the pandemic, there were severe shortages of key medicines, healthcare workers and medical devices across the Asia-Pacific due to reasons such as supply chain disruptions and growing trade protectionisms, including export bans on health products. International organisations such as the WHO and WTO since then have emphasised the need for cooperation, especially at the regional level, to reduce supply chain and logistics disruptions, improve the production capacity for vaccines and other medical products and to lessen inequity in access to essential medical supplies related to COVID-19. Measures such as online and fast-track clearances by customs and drug regulators, visa relaxation for easier mobility of healthcare workers, and relaxation of regulations on data sharing are being promoted, both at the country level and through international organisations to encourage countries to adopt simpler regulatory measures to help address the pandemic.

To facilitate access to essential healthcare products, regional blocks such as ASEAN have taken strong measures to mitigate supply chain disruptions. For example, in 2020, ASEAN got together to adopt the Hanoi Plan of Action to strengthen economic cooperation in supply chain connectivity to ensure smooth flow of essential goods and prevent supply chain disruptions.[104] ASEAN members signed an MoU, adopted in

[104] https://asean.org/asean-mou-on-essential-goods-enters-into-force/ (last accessed on 23 March 2022)

June 2020, which commits member states to refrain from imposing restrictive trade measures or non-tariff measures on essential goods and supplies, except for public health emergencies. The memorandum includes a list of over 250 essential items, including test kits, medical supplies, vaccines, medical equipment and certain food and agricultural products.[105]

Countries in South Asia, which is one of the most populated sub-regions in Asia-Pacific and is constrained by gaps in public health infrastructure, basic sanitation facilities, and low government funding on healthcare, realised the need to come together and rope in the private sector to generate funds to address the pandemic. Thus, multilateral organisations such as the World Bank and regional organisations like SAARC have been trying to mobilise funds for emergency support (see Box 7); however, the progress at the regional level is slow due to lack of political goodwill between India and Pakistan.

Box 7: Example of Collaborations in South Asian Association of Regional Cooperation

With the onset of the COVID-19 pandemic, India mobilised SAARC countries to have a COVID-19 Emergency Fund, of $18 million. India deposited $10 million into the fund; Bangladesh contributed $1.5 million, Nepal $1 million, Afghanistan $1 million, Sri Lanka $5 million, the Maldives $200 thousand, and Bhutan $100 thousand. Pakistan committed $3 million but said that all member contributions should be attached to the institutional procedures of SAARC, managed by the Secretariat of the Institution, located in Kathmandu (Nepal). The general regulations for the use of the fund is yet to be established. There have been discussions on sharing information and how to leverage the regional experience of the telemedicine network project implemented in Afghanistan, Nepal and Bhutan to address the pandemic.

Source: Compiled from https://COVID19-emergency-fund (last accessed January 17, 2022)

[105] https://asean.org/asean-mou-on-essential-goods-enters-into-force/ (last accessed on 23 March 2022)

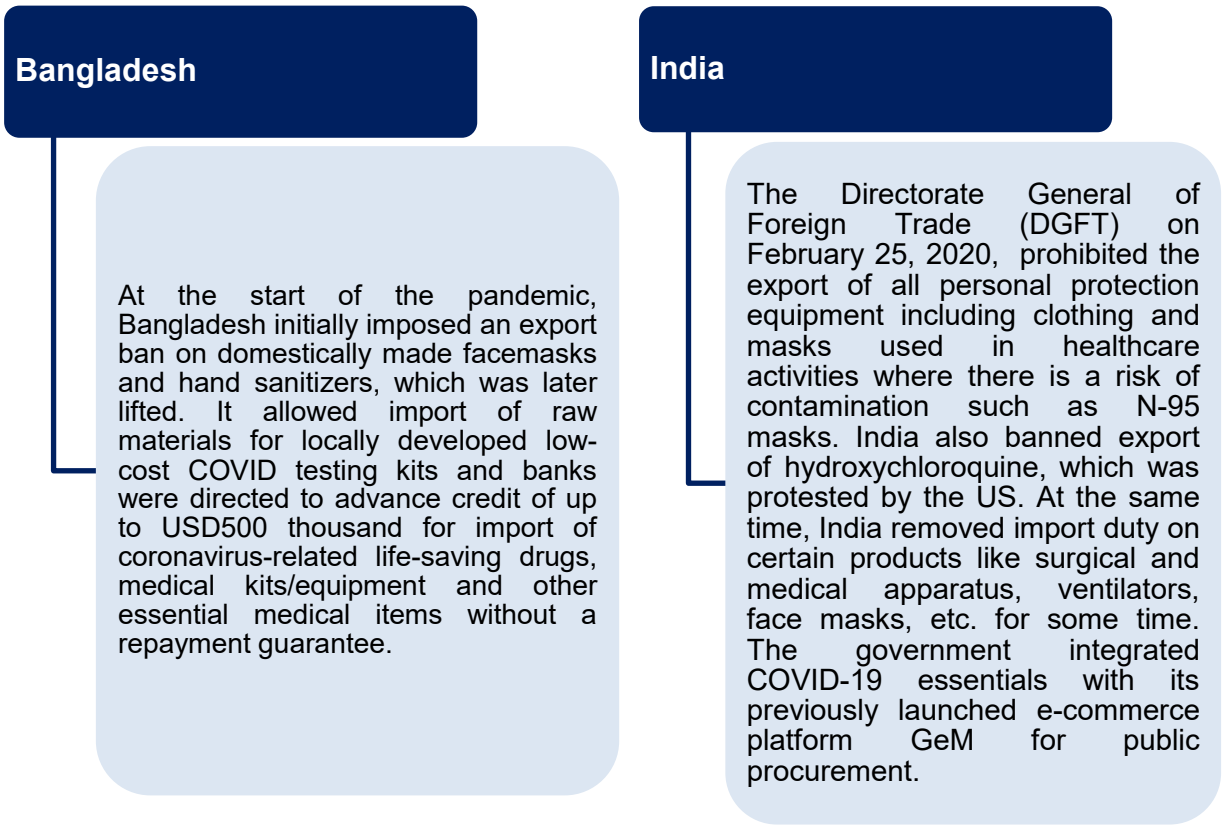
Given this, section 5.1 discusses some of the key measures and changes seen in the Asia-Pacific region during the pandemic followed by section 5.2, which presents some examples of trade and collaboration in goods during the pandemic. Section 5.3 presents the changes in cross-border trade and investment in services during the pandemic and Section 5.4 examines some key features of trade agreements that have been signed since the pandemic.

5.1 Examples of Measures/Initiatives taken during and after COVID-19

With the onset of the pandemic, globally, more than 95 countries have implemented some form of trade restriction measures. Most of these measures pertain to a complete ban on export of personal protection equipment (PPE), ventilators, alcohol-based hand sanitizers, food and certain other products to mitigate critical shortages at the national level. Some countries have not opted for a direct ban but instead used methods like licence requirements and permits to export healthcare products. At the same time, over 107 countries have liberalised their import policies[106] as they needed access to critical health care products. However, export restrictions adversely affected the importing countries (see Figure XVII for some examples).

[106] https://www.unescap.org/sites/default/files/143%20Final-Prerana%20Manral-India_0.pdf (last accessed on 27 January 2022)

Figure XVII: Examples of Measures during the Pandemic



The pandemic also highlighted the need for a diverse supply chain to ensure reliable and safe supply of medicines, vaccines and other health related products. This led to cross-border collaboration across multiple stakeholders. For example, in 2022, the WHO announced a collaboration with the Republic of Korea, opening a global bio-manufacturing hub to provide training to low-and middle-income countries to help increase the productions of vaccines and other medications such as insulin and monoclonal antibodies.[107]

[107] https://pharmaphorum.com/views-and-analysis/who-announces-international-hub-for-mrna-vaccine-training/ (last accessed on 23, March 2022)

China is one of the largest global suppliers of critical medicines and medical devices. During the pandemic, several countries like Japan and Australia expressed their willingness to diversify their supply chains from China, and India saw this as an opportunity to attract investment from such countries. Launched in September 2020, the Supply Chain Resilience Initiative (SCRI) is one such measure taken by Japan in partnership with Australia and India. The objective of SCRI is to reduce the dependence on any one nation and improve the resilience of supply chains by diversifying risks and minimising potential disruptions. The initiative focuses on various sectors,[108] including pharmaceuticals and medical devices.[109]

On 2 October 2020, India and South Africa made a submission to the WTO requesting the waiver of certain provisions of the TRIPS agreement for the prevention, containment and treatment of COVID-19.[110] However, some developed countries like the EU objected to the proposal. Other developments during the pandemic include the liberalisation of data sharing policies for critical healthcare data for research on drugs, vaccines, treatment, etc., including cross-border research, and monitoring the spread of the disease. There has also been streamlining of the customs clearance process through the use of technology. These are discussed below.

5.1.1. Liberalisation in Data Sharing Policies

Prior to the pandemic, a number of countries in Asia-Pacific adopted an extremely rigid data sharing policy, which restricted not only cross-border data sharing, but also sharing of data among healthcare entities and with technology firms within a country, especially of sensitive health sector data. In April 2020, the Government of Singapore was the first government in the world to introduce a bluetooth-based mobile application, which permitted users to receive a notification when they have been in close contact with individuals who have been infected by the virus (Abay et al., 2020). The data was shared with public health authorities to analyse and predict epidemic spread (WTO, 2020a). Subsequently, other countries also relaxed their data sharing

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[108] Such as petroleum, automobiles, textiles, and steel.

[109] https://www.business-standard.com/article/economy-policy/key-areas-to-be-focused-under-india-japan-australia-supply-chain-initiative-120110601741_1.html (last accessed on 22 March 2022)

[110] https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/IP/C/W669.pdf&Open=True (last accessed on 21 December 2021)

policy, sometimes through their disaster management regulations rather than through data sharing regulations (see, for example, Box 8 for the Republic of Korea), which indicates that this relaxation may be temporary rather than permanent. Following the cross-border relaxation on data and information sharing, the Philippines became the largest provider of telemedicine in the world.[111]

Box 8: Post-COVID-19 Data Sharing Policy: A Case Study

In the Republic of Korea, prior to the pandemic, The Personal Information Protection Act (PIPA), 2011, banned the collection, use, and disclosure of personal data without the prior informed consent of the individuals whose data are involved. However, during COVID-19, amendments were made to the Contagious Disease Prevention and Control Act (CDPCA) of 2009 and authority was granted under the Act to override certain provisions of the PIPA and other privacy laws. The amendments allowed sharing of seven categories of data, which included sharing of sensitive data such as geo-location data, personal identification information and prescription and other medical records that pertain to infected individuals. The amendment allows the Korea Centres for Disease Control and Prevention to share data with central, municipal, or local governments, national health insurance agencies and healthcare professionals and their associations (Park et al., 2020).

Source: Mukherjee et al. (2020); and Park et al. (2020)

5.1.2. Streamlining Information and Procedures for Customs Clearances

To keep trade flowing, government and border agencies, port authorities and customs administrations have undertaken reforms and measures to prevent the further spread of COVID-19 without disrupting the supply chain and the trade flow of essential goods. The availability of and access to information on trade procedures are crucial for smooth trade flow, and one-stop information portals have been developed or are being developed by many countries to streamline the availability of necessary information and processes. For example, the UNCTAD Automated System for Customs Data is implemented in more than 90 countries. The customs information system provides

[111] https://www.manilastandard.net/tech/tech-news/347760/medgate-philippines-named-1-of-top-telehealth-providers-in-asia-pacific.html (last accessed on 10 May 2022)

customs personnel, cross-border agencies and traders the ability to submit and exchange required documents and data electronically, expediting the clearance of imports and exports, and reducing the need for face-to-face interaction (UNCTAD, 2020). In products like medicines and medical devices, the KIIs found that in countries like India, clearances by authorities like the Drug Controller are made online through implementation of a technology-based risk management system (RMS). The ADB is supporting the initiatives of the Government of India in this regard. If a proper technology-based RMS is implemented, it is likely to continue after the pandemic.

5.1.3. Trade and Collaboration in COVID-19 related Goods

According to the WTO, in 2018, exports of medical products, which were valued at $957.7 billion, increased to $1159.7 billion in 2020. When the COVID-19 pandemic started in the second half (S2) of the year 2019, medical products accounted for 5.4 percent of total world merchandise trade; by the first half (S1) of 2021, the share had increased to 6.1 percent. The sharp increase in trade value at the start of the pandemic was mainly due to the rise in prices resulting from shortages. Subsequently, many countries started domestic production, which is expected to control prices and stabilise trade in value terms in the future.

In terms of quantity, the global market is projected to grow at an average annual rate of 22.9 percent from 2019 to 2023, rising from 14,600 million units to over 33,360 million units over this period. Among the four main groups of medical products, namely, medical equipment, medical supplies, medicines and personal protective products, medicines have accounted for more than half of the value of trade in medical products (WTO, 2021b). Demand for ventilators, which peaked at the start of the pandemic, nearly doubled in trade value with a year-on-year (y-o-y) growth of 95.3 percent in the second half of 2020. This has since flattened because such medical equipment is both durable and reusable and is generally linked to hospital capacity. Further, due to the sudden increase in demand and export restrictions, countries that were previously dependant on imports for COVID-19 related products, also started production of the goods. For example, India was completely import dependent for PPE kits in early 2020 but has now become one of the largest producers and exporters of PPE kits. A collaboration between the Ministry of Textiles, Ministry of Health and

Family Welfare and domestic textile companies made India a PPE manufacturing hub (Nayyar and Lakshmanan, 2020).

The demand for testing kits has grown with the pandemic. Since the first half of 2020, there has been double-digit growth in exports and imports of test kits. Following the development and approval of COVID-19 vaccines, cross-border trade in items critical for administering vaccines like rubber gloves, syringes and needles has grown (WTO, 2021b). In the first quarter (Q1) of 2020, rubber gloves, syringes and needles accounted for only 10 percent of trade in medical supplies, but that share almost doubled to more than 18 percent by the second quarter of 2021. Malaysia has always been the largest supplier of rubber gloves with more than 50 percent of the global market even before the COVID-19 pandemic. The other top suppliers of rubber gloves are China (2nd), Thailand (3rd) and Indonesia (4th) (WTO, 2021b). Thus, a majority of the suppliers of rubber gloves are in Asia, which accounts for 86 percent of the export market for gloves. Among Asia-Pacific countries, China (1st), Malaysia (5th) and Japan (6th) have been the major exporters of COVID-19 critical health products since 2020. Overall, there has been a rise in trade in healthcare products, but within this sector, demand for different products is changing over time.

Table 10: Trade in Medical Products with Focus on COVID-19 Related Products

Value in $ Billion

Product Categories	Exports				Imports			
	2018	2019	2020	2021(S1)	2018	2019	2020	2021(S1)
All medical products	957.7	999.1	1159.7	640.8	966.1	1016.0	1183.2	645.1
Medical equipment	134.5	140.9	151.0	79.2	135.8	142.0	155.5	80.6
Ventilators	7.4	8.0	13.9	5.7	7.9	8.3	14.9	6.4
Medical supplies	165.0	172.5	204.4	122.2	162.6	169.3	201.5	128.0
Test kits & diagnostic reagents	27.3	28.2	39.2	22.8	28.5	28.5	41.2	29.9
Rubber gloves	N.A.	4.1*	16.6	16.5	N.A.	4.2*	15.9	17.1
Syringes and needles	N.A.	4.4*	8.9	5.1	N.A.	4.6*	9.5	5.6

Product Categories	Exports				Imports			
	2018	2019	2020	2021(S1)	2018	2019	2020	2021(S1)
Other supplies	N.A.	135.6*	139.6	77.8	N.A.	132.0*	135.1	75.5
Medicine	520.2	546.3	603.2	349.8	533.3	567.7	620.0	349.2
Personal protective products	138.0	139.5	201.1	89.6	134.4	137.0	206.0	87.3
Face masks	75.5	77.2	136.3	53.1	76.1	78.2	141.4	51.6
Hand sanitizers	37.1	35.9	35.1	N.A.	34.7	34.1	35.6	0.0
Hand soaps	22.0	22.9	25.9	N.A.	20.6	21.7	24.9	0.0
Other protective covers	3.4	3.5	3.8	36.5	3.0	3.2	4.1	35.7
COVID-19-critical products	294.7	303.9	394.8	197.9	288.9	299.9	399.0	197.6

Source: WTO (2021a) and WTO (2021b)

*Note: * represents data for second half of 2019.*

N.A.: Not Available

S1: first half

As far as tariffs are concerned, the average applied most-favoured-nation (MFN) tariffs on rubber gloves by WTO members was 8.2 percent in 2021, and the tariffs on syringes and needles was under 4 percent. Thus, even critical products needed for administering vaccines and for addressing the pandemic have been facing tariff issues.

Global collaborations and prioritised resource allocations have been key to the rapid development of COVID-19 vaccines. While research for the development of vaccines is cross-border, manufacturing is happening in some countries of the region that offer low-cost manufacturing facilities. With vaccines now being developed and available, trade discussions have focused on how to distribute and administer them and enhance access through reduced tariffs and other trade barriers to combat the spread of the virus. There is an increasing number of MRAs in the case of vaccines; this has helped remove travel restrictions (see Table 7). MoUs and agreements have been signed by countries for joint research on medicines, vaccines etc (see Table 8). In this regard, both an understanding of the needs and requirements of different countries, especially LDCs, and of the need for cross-border collaboration in the Asia-Pacific region are

needed. Countries in the region that have set up or expanded their manufacturing facilities may also need to have multi-stakeholder discussions, within and across countries, on partnerships for the optimal use of such facilities in the future.

5.2. Cross-border Trade and Investment in Healthcare Services

Cross-border trade and investment in healthcare services saw some new developments during the pandemic. First, there has been lower cross-border investment in healthcare infrastructure, which is a concern for developing countries and LDCs. Second, due to shortages of healthcare workers, many developed countries are now more open to attracting healthcare professionals and workers from developing countries to manage their healthcare needs, leading to more possibilities for Mode 4 trade from developing countries like India.[112] Developed countries such as the US, the UK and Australia relaxed their domestic work permit and visa rules as measures to meet the shortages in the sector. The US had relaxed its regulations to allow doctors on the H1-B work visa to practice telemedicine and help local hospitals meet the surge in demand due to the pandemic.[113] The UK, due to Brexit and the pandemic, announced temporary relaxation of immigration rules for care workers for 12 months.[114] The Australian government also wanted to allow up to 2000 international doctors and nurses during the COVID-19 pandemic. However, according to the KIIs, in practice, migration is easier from a country like the UK to Australia than from India to Australia due to the non-recognition of the degree and practices. Hence, barriers related to degree recognition continue to persist. Some experts also think that the measures are mostly temporary to address current shortages, and there is need for long-term measures like mutual recognition of degrees and practices for healthcare workers.

Third, services backed by digital technologies such as teleworking and telemedicine have emerged as the key drivers of new globalism during the pandemic (Lashitew and Erumban, 2020; Marel and Guinea, 2020). The number of users of online medical

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[112] https://journals.sagepub.com/doi/full/10.1177/2319714520984676 (last accessed on 24 January 2022)

[113] https://economictimes.indiatimes.com/nri/visa-and-immigration/covid-19-us-permits-doctors-on-h-1b-work-visa-to-practice-telemedicine/articleshow/75752366.cms (last accessed on 31 March 2022)

[114] https://www.mondaq.com/uk/work-visas/1157008/health-and-care-worker-visa-relaxation-will-it-make-a-difference (last accessed on 31 March 2022)

platforms in Asia-Pacific countries like Australia, China, Indonesia, and Singapore has grown rapidly during the pandemic. The pandemic has also created a need for remote access to doctors and other support such as support for mental health issues. This shortage has led to development of digital therapy apps, online doctor consultation apps, etc., many of these being designed by start-ups in the region. Digital healthcare applications, hardware and systems require development platforms for ideas that can come from different stakeholders (for example, technology start-ups, academia, research bodies, think tanks and generally, people at large). According to the KIIs, open-source platforms will become the key to the development, proof of concept and subsequent release of products into the market. Open EHR,[115] for example, aims to develop common standards for EHR by providing industry-standard modelling tools, templates, extensible mark-up language (XML)-based data interchange models and productivity tools that developers can directly use to build their applications. Companies like the Indian medical device manufacturer, Medtronic, launched an Open Innovation Platform[116] for the development of partnership networks for capacity building in innovation. In future, there is need for countries in the region to come together to facilitate equal access to digital technology to improve the quality of healthcare services and to address shortages of, say, doctors, leveraging on their mutual strengths. Multilateral organisations can support such initiatives.

5.3. Trade Agreements: During Post-COVID-19

Several trade agreements have been signed since 2020 by Asia-Pacific countries, the most notable among them being the RCEP Agreement. Some studies (such as Thangavelu, et al., 2021) have pointed out that the RCEP agreement will help mitigate the negative effects of the COVID-19 pandemic. They also mention that the RCEP has great advantages for the development of global and regional value chains, as it allows access to factors of production from 15 trading nations, including those in the healthcare sector. While the RCEP members have shown interest in reducing tariffs on

[115] https://www.openehr.org/downloads/platform/ (last accessed on 11 December 2021)
[116] https://health.economictimes.indiatimes.com/news/health-it/medtronic-launches-first-ever-open-innovation-platform-in-apac/87163242 (last accessed on 11 December 2021)

pharmaceutical products and increasing manufacturing, distribution, and administrative capacities, especially for COVID-19 vaccines, some COVID-19 products are not covered in the agreement. For example, in the RCEP, no ASEAN member country has given commitment in medical kits, including COVID kits (HS code 300211).

Some Asia-Pacific countries, like Japan and Australia, have been trying to diversify their supply chains and reduce dependence on China and India has emerged as a preferred destination. India has fast-tracked the process of negotiating trade agreements. The country has signed trade agreements with Mauritius (in 2021) and United Arab Emirates (February 18, 2022) and the Interim Economic Cooperation and Trade Agreement with Australia (April 2, 2022). It is negotiating trade agreements with the UK, EU and Canada and the healthcare sector is a key sector under these agreements. The Comprehensive Economic Partnership Agreement (CEPA) between India and United Arab Emirates, which came into effect from 1 May 2022,[117] is India's first FTA that was concluded in just 88 days and came into force in less than 90 days. In this agreement, India has committed to eliminate tariffs on all pharmaceutical products (HS Code 30) at the time of implementation of the agreement (1 May 2022); and for most of medical devices within five years (with effect from May 2026). However, the agreement has one of the most rigid RoO to prevent products manufactured in third countries from entering India through the CEPA. The RoO mandates 40 percent value addition in the United Arab Emirates and a certificate of origin issued by the Ministry of Economy, United Arab Emirates. Generally, in trade agreements, the value addition is between 30-35 percent. Rigid RoO may make it difficult for exporters to take advantage of the trade agreements and they may continue to export through the normal route. Unless there is noticeable use of the trade agreement, it is difficult to understand the benefits or issues faced in the health sector.

In the Interim India-Australia Economic Cooperation and Trade Agreement (ECTA), which was signed on 2 April 2022[118] India has committed to eliminating custom tariff on pharmaceutical products in five years but did not give commitment in medical devices (it is

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[117] The text of the agreement is available at Ministry of Commerce, Government of India, *https://commerce.gov.in/international-trade/trade-agreements/comprehensive-economic-partnership-agreement-between-the-government-of-the-republic-of-india-and-the-government-of-the-united-arab-emirates-uae/*

[118] The text of the agreement is available at https://www.dfat.gov.au/trade/agreements/negotiations/aifta/australia-india-comprehensive-economic-cooperation-agreement

in the 'Exclusion' List). Overall, the coverage and depth of commitments in the interim agreement is much lower than what Australia offers and gets from its other trading partners.

In the India-Australia ECTA, there is a separate annexure on pharmaceuticals products to address technical barriers faced by the pharmaceutical industry. Both countries have agreed to set up the "Therapeutic Goods Regulator",[119] which will (a) work to facilitate trade in human prescription medicines and medical devices and (b) will recognise reports from a regulatory authority for pre-market evaluation, quality assessment, etc., of products manufactured in the two countries (Annex 7A Pharmaceuticals). In the India-United Arab Emirates Agreement, there is scope for bilateral collaboration and recognition of pharmaceutical products (see Box 9). Thus, the agreements explore various ways of regulatory cooperation and faster clearances.

Box 9: India-United Arab Emirates Agreement: Bilateral Cooperation on Pharmaceutical Products

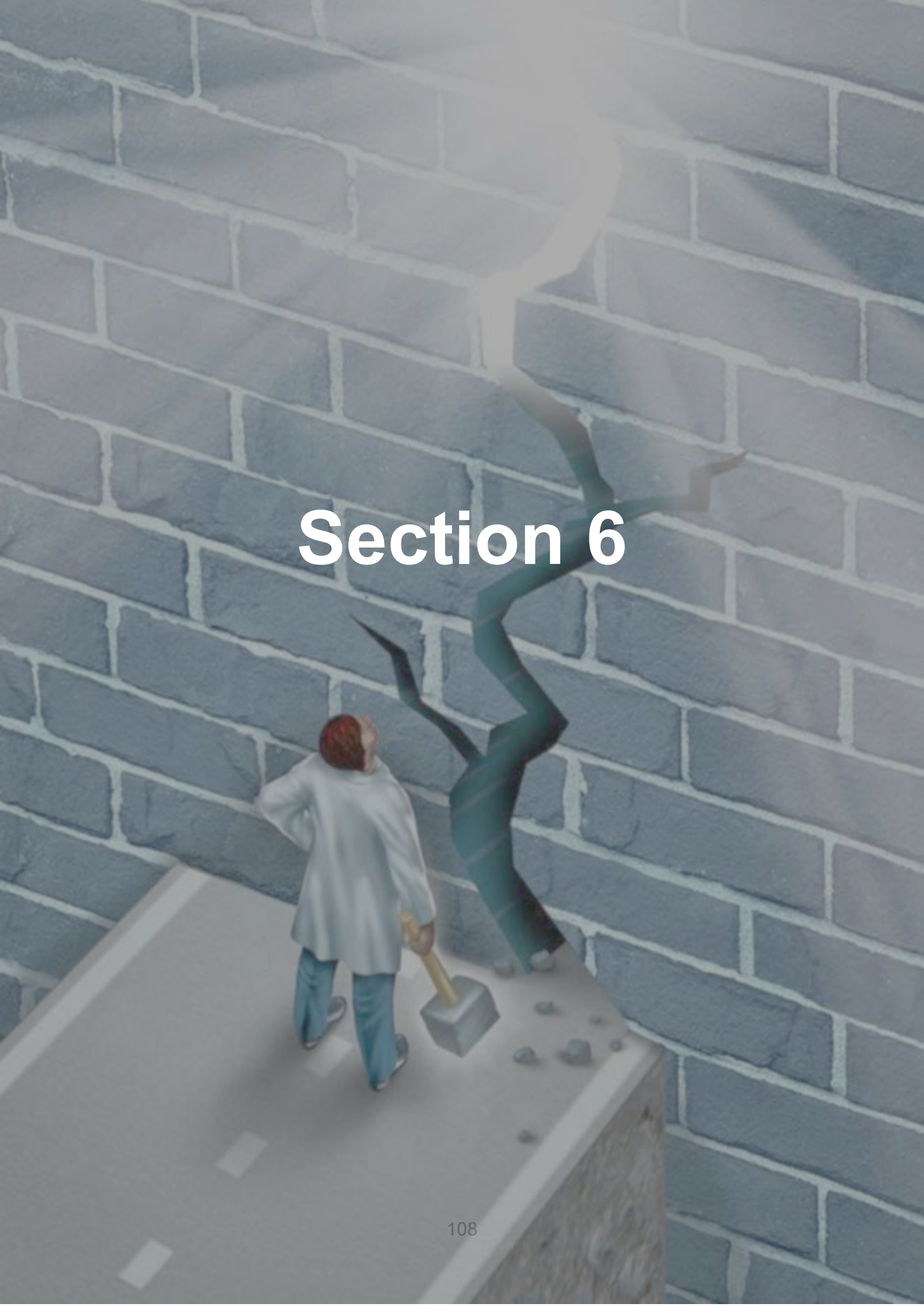
The bilateral cooperation on pharmaceutical products aimed to facilitate access to finished pharmaceutical products (FPPs), and certain marketed biological products for human use by establishing 'fast-track' procedures for approval of pharmaceutical products that have been approved by at least one regulatory authority from countries like Australia, Canada, European Union, Japan, the United States of America, or the United Kingdom. It states that marketing authorisation shall be provided within 90 days without any inspections if approved by the regulators of the listed countries in both markets but, for all other pharmaceutical products where inspections are required, India and the United Arab Emirates, to the extent possible/feasible, will grant marketing authorisation within 270 days of the application for such authorisation.

Source: https://commerce.gov.in/wp-content/uploads/2022/03/Chapter-5-Annex-5A.pdf (last accessed July 18, 2022)

[119] For the purpose of this Annex "Therapeutic Goods Regulator" means for Australia, the Therapeutic Goods Administration (TGA) of Australia, or its successor, and for India, the Central Drugs Standard Control Organisation (CDSCO), or its successor. For more details refer to https://www.dfat.gov.au/trade/agreements/negotiations/aifta/australia-india-ecta-official-text/annex-7a-pharmaceuticals (last accessed 6 June 2022)

While government procurement has been covered in the India-United Arab Emirates CEPA, the entire healthcare sector has been excluded from the government procurement agreement.

To conclude, while the pandemic presented an opportunity for countries to increase efforts to rebuild and re-invest in the health sector, harmonise standards, facilitate trade and investment for vaccine related products (e.g., speeding up approvals), digitalise, simplify and streamline customs procedures, and to fast-track trade agreements, the scope and coverage of the healthcare sector in trade agreements remain limited.



Section 6

6. Barriers

As this study analyses the coverage of the health sector (including products and services) in existing regional and bilateral trade agreements, frameworks, forums and other arrangements in the Asia-Pacific region and its sub-regions, it found that the coverage of the health sector (both goods and services) in regional and bilateral agreements and in international forums is limited. Many countries, especially developing countries and LDCs, have high tariffs while developed countries have rigid standards and requirements that restrict trade. Most of the trade agreements signed are north-south and there is limited south-south trade (see section 3.11). Apart from ASEAN, other regions like SAARC have not made much progress in regional collaborations in this sector (see section 4).

The previous sections show that many trade agreements do not cover healthcare products and services, and even if they do cover it, there is limited commitment in the agreements. Further, there are only a few regulatory commitments like, MRAs for products or recognition of degrees of medical personnel in service. Some trade agreements refer to MRAs, but these are often not signed and implemented. Health sector is often curved out of commitments under investment agreement or in the government procurement chapter. The engagement of the private sector is much below potential in this, and there is a lack of partnership and collaborations between the private sector and government.

In many countries, governments play a key role in regulating healthcare, and the government procurement process and requirements can, in itself, be a barrier to trade. The other trade barriers include standards and protection of IPR – while developed countries have higher standards, lack of clarity on standards and processes and violation of standards or variable quality can be an issue for developing countries and LDCs. Rigid protection of IPR limits cross-border collaboration in research and lead to higher prices for pharmaceutical products.

Firms from developed countries dominate trade and there is limited presence of companies from developing countries in cross-border trade. Cross-border investment is mostly from developed and emerging market countries, and these investments flow to growing markets rather than to LDCs which need them the most.

One of the reasons for limited commitments in trade agreements is the wide difference in access to resources, funding and technology across the Asia-Pacific countries, resulting in severe disparity among the developed and developing countries, and LDCs of the region. Further, in many countries, especially in developing countries and LDCs, regulations are evolving in areas like private participation and healthcare data sharing, and domestic companies are non-competitive and/or may not have the capacity to face competition after trade liberalisation. Experts from some LDCs felt that they lack the capacity to negotiate complex trade agreements covering goods, services, IPR protection, RoO, standards, etc. The healthcare sector is now closely linked to other sectors like technology, which adds to the complexities of trade negotiations as issues like data sharing in trade agreements gain prominence. These domestic issues make a country reluctant to sign trade agreements and/or undertake commitments under the agreements.

The COVID-19 pandemic also brought forth new challenges like sporadic bans/export restrictions, supply chain disruption, issues in access to vaccines and critical healthcare products, gaps in information and data sharing; these have been discussed in section 5.

Many COVID-19 products are not covered in recent trade agreements like the RCEP agreement. At the same time, COVID-19 has led to rapid digitalisation and on-line customs clearances and trade facilitation in many countries and enhanced cross-border research. Countries have built in COVID-19 facilities like vaccine manufacturing and firms from developing countries are worried about how to sustain these facilities in a post-COVID world.

In this context, the following subsections present the barriers and issues in the health sector, with focus on barriers to trade in goods (section 6.1), trade in services (section 6.2), and investment (section 6.3). The subsections also discuss issues related to universal service obligation (USO), government procurement, MRAs and other collaborations between countries/agencies.

6.1 Issues in Trade in Goods

6.1.1. Pharmaceutical and Medical Goods including Medical Devices

Despite there being several trade agreements, not all Asia-Pacific countries are party to the agreements. For example, the WTO Pharmaceutical Agreement, signed in 1994, is applicable to only a handful of countries in Asia-Pacific, like Australia, Japan and Macau (China). The rest of the Asia-Pacific countries did not sign the trade agreement. The exclusion of many developing countries and LDCs, especially those countries with high tariff rates, from trade agreements restricts cross-border trade of healthcare goods. The Asia-Pacific countries, Nepal, Pakistan, Russia, India and Lao impose some of the highest average ad-valorem duties on pharmaceutical products (HS code 3004) (Banik and Stevens, 2015). For example, Nepal and Pakistan have the highest tariff rates on medicines in the world at 14.6 percent and 11.1 percent respectively. It Besides, these developing countries and LDCs also have an inverted duty structure in the case of several products. This, in turn, adversely affects manufacturing in importing countries. Thus, the exclusion of these countries from trade agreements does not allow the issues of high-tariff and an inverted duty structure to be resolved, creating a major impediment to trade in medical goods. In addition, treaties/agreements that do involve developing countries and LDCs often do not include health products, or cover health products only to a limited extent. For example, the Pacific Island Countries Trade Agreement (PICTA),[120] which was came into force on 13 April 2003, does not cover health products.[121] COVID-19 goods are not covered in more recent trade agreements such as the RCEP. There are also gaps in product definition, which leads to their exclusion from trade agreements, for example the there are no HS Codes defined for traditional products.

- The variety of trade agreements signed by Asia-Pacific countries also have long phasing out periods for tariff reduction, along with varying commitments to different countries, giving some trading partners better market access than others and making it difficult to read the agreements. For example, the RCEP has given a longer tariff phasing out period than bilateral treaties between ASEAN members and other RCEP countries. This may reduce the benefits/utilisation of the RCEP agreement. In high tariff countries, this is a key

[120] The member countries include Solomon Islands; Cook Islands; Fiji; Kiribati; Nauru; Vanuatu; Niue; Micronesia, Federated States of; Papua New Guinea; Tonga; Tuvalu; Samoa

[121] The text of the agreement is available at https://wits.worldbank.org/GPTAD/PDF/archive/picta.pdf (last accessed on 8 January 2022)

trade distorting issue. There is also limited application of the most-favoured nation (MFN) clause.[122]

- There are also issues in registering herbal and ayurvedic products as 'drugs' in some countries, especially developed countries. The non-recognition of traditional medicines often resulting in high registration costs and clinical trials, in addition to lack of comprehensive coverage of goods. For example, in the US and many EU member states, ayurveda products, especially single herb preparations, can be sold as food supplements or dietary supplements, but these cannot be sold as medicines since ayurveda is not recognised under the healthcare system.

6.1.2. Sanitary and Phytosanitary Measures and Technical Barriers to Trade

Even when tariffs are reduced, the issue of wide disparity in standards and lack of conformity in standards across countries leads to trade barriers. These complications increase overall trade costs, adding to entry barriers and restricting foreign access to the market even if tariffs are reduced. There are four key issues relating to standards:

a) Different countries have different standards, and the lack of uniform standards and processes across countries, in both modern and traditional medicines and devices, results in cumbersome approval processes by drug regulators of importing countries. This is a major trade barrier especially for developing countries and LDCs that may not have fully developed standards or may not follow the basic principles and/or may not be aligned to international requirements like the WTO SPS and TBT agreements.

b) Trade agreements also do not have a clear and transparent mechanism set up to ensure conformity in standards/mutual recognition of standards. There are also no time bound commitments on mutual recognition of standards even if they are mentioned in the trade agreement. For example, in Indonesia, product registration is regulated by the National Agency of Drug and Food Control.

[122] MFN means that if a country gives better commitments to its trading partners in a future trade deal, these will automatically be applicable to its trading partners with whom trade agreements exist. While this reduces the bargaining power of countries as they review their older trade agreements, it makes the process much smoother for countries and reduces trade distortions as they sign trade multiple agreements.

Indonesia has strict regulations on pharmaceutical product registration under which registrants must submit application documents that include the drug master file, a manufacturing licence, a Good Manufacturing Practice (GMP) certificate and manufacturing site master file. The timeline for drug registration is typically between 1 and 3 years.[123]

c) A major domestic reform issue is the cumbersome processes for the approval of drugs and vaccines. Moreover, the lack of well documented and well-laid out processes for handling pandemic and health disasters, healthcare professionals' constraints and the time taken to approve drugs and vaccines led to delayed vaccination in some countries during the pandemic.

Although ASEAN countries are trying to harmonise their standards and approval processes, issues still remain.

6.1.3. Rules of Origin

The increased number of trade agreements also gives rise to compliance complexities relating to RoO. There are wide differences among governments on how the RoO should be applied. Some apply the criterion of change of tariff classification, others the ad-valorem percentage criterion and some the criterion of manufacturing or processing operation. Sometimes all of these are combined in a trade agreement. Often, product classification leads to confusion at the implementation stage. Rigid RoO such as in the India-United Arab Emirates CEPA and consequent compliance complexities increase trade costs because businesses do not use the tariff concessions under these agreements.

6.1.4. Intellectual Property Rights

The WTO TRIPS agreement, one of the most comprehensive multilateral agreements on IP that plays a role in resolving trade disputes related to IP, is binding on all member countries; hence, all WTO member countries in the Asia-Pacific region are TRIPS

[123] https://www.pacificbridgemedical.com/regulatory-services/pharmaceutical/product-registration/others/ (last accessed on 21 January 2022)

compliant. However, not all Asia-Pacific countries are WTO members and issues related to IPR implementation and monitoring remain.

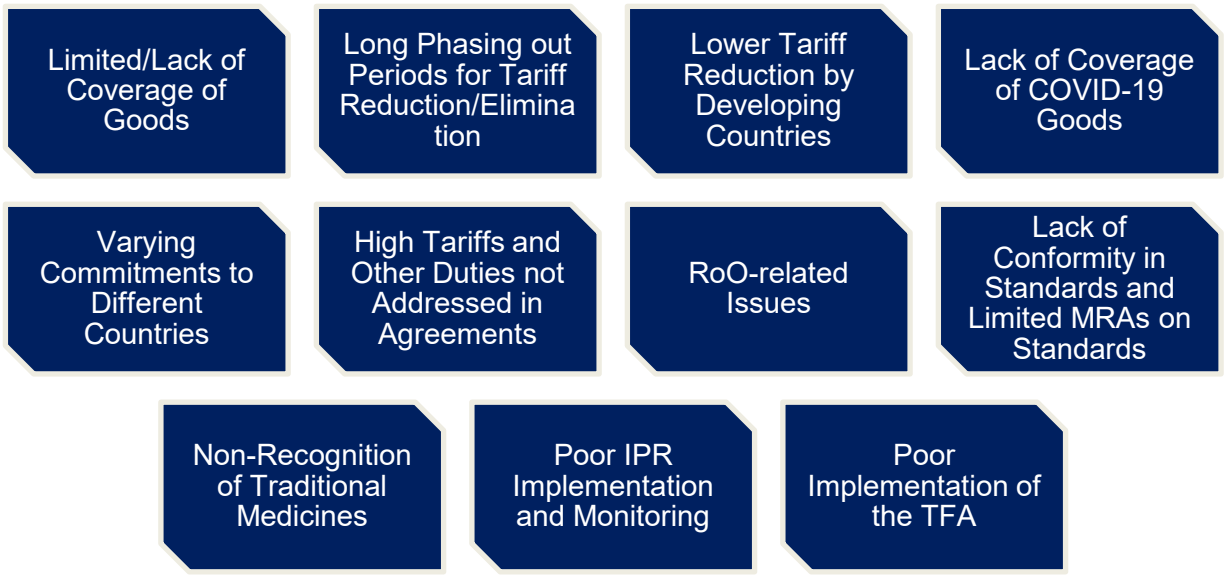
Another major IPR issue is in traditional medicines, which are not patented. For example, most ayurvedic products are not patented as ayurveda is treated as traditional knowledge. This makes it difficult to have proprietary rights on the drugs.

6.1.5. Trade Facilitation

Another barrier to trade in medical goods is the poor and slow implementation process of the WTO Trade Facilitation Agreement. There is a large amount of paperwork and physical documentation required for cargo clearances. Interlinkages between the customs agencies and other agencies like drug control departments/regulators through the use of digital technology is missing. The lack of a digital risk management system, multiple physical document requirements and verifications cause delays in clearances, enhancing the chances of spoilages and wastage, especially of perishable health products. Ports of entry do not have appropriate cold storage facilitates for perishable cargo and access to laboratories/testing facilities for health products. The product approval process is not well-laid out in customs clearance documents, especially with respect to the health sector.

Figure XVIII summaries the key issues that have not been appropriately addressed in trade agreements.

Figure XVIII: Barriers to Trade in Healthcare Goods



6.2. Issues in Trade in Services

6.2.1. Mode 1 or Sharing of Health-related Data Issues

Healthcare being a registered profession faces stringent scrutiny related to registration and qualification requirements. In addition, horizontal restrictions are applicable for Mode 1 services, for example, data related regulations. There are three key issues related to the trade in services agreements. First, the entire process of implementation takes time. For example, the SAARC Agreement on Trade in Services (SATIS) was signed between the parties in 2010 and is based on a "positive list" approach. The countries have not yet been (2022) able to negotiate their positive lists, primarily due to the issues between India and Pakistan. Second, trade agreements offer limited commitments, subject to certain restrictions, which vary with every trade agreement. Third, sometimes commitments are lower than the autonomous regimes, taking away the benefit of the trade agreement.

Trade in health services through Mode 1 is affected by data sharing related regulations such as data localisation requirements, data sharing and personal protection related regulations. While some countries do not have any data protection regulations, a few Asia-Pacific countries do, which can be a major trade barrier. There is no provisions under the trade agreements to share data during the pandemic. Restrictive policies

adversely affect a country's ability to provide services like telemedicine that can help mitigate shortages of healthcare workers in some countries in the region.

Additionally, as health sector is treated as a sensitive sector, there can be sector specific restrictions. Countries have mentioned these restrictions in their trade agreements. For example, in Viet Nam, there is a restriction on electronic transmission of health consultancy services such as telemedicine, etc. In the RoK, telemedicine is not allowed and for health consultancy, health professionals have to follow PIPA, September 2011, which stipulates consent procedure, scope of use, and other measures to protect personal health and medical information. Third parties using the health data for their own purposes require to give special notice to and take consent from the data subjects. The regulations require data handlers and subcontractors to disclose its privacy policy related to personal data processing.[124]

6.2.2. Mode 3 or General Foreign Investment Related Requirements

As discussed in section 3.5, in Mode 3 services, most Asia-Pacific countries (except Australia and the Philippines) have given partial commitments in their trade agreements. In other cases, these commitments are lower than the autonomous regime as previously mentioned. There are several restrictions imposed by developing countries and LDCs on foreign investment despite their greater need for FDI. While Asia-Pacific countries are increasingly acknowledging the need to have foreign investment to supplement domestic investment in the health sector, existing agreements lack provisions for foreign investment inflows for various reasons.

- First, countries impose entry restrictions on FDI in healthcare facilities and medical services to protect domestic hospitals and clinics. These can be in the form of FDI ceilings, FDI bans or conditional entry. For example, in Myanmar, up to 70 percent foreign equity participation is permitted in accordance with the Law relating to 'Private Health Care Services 2007', in medical and dental services and services provided by midwives. In India, foreign investments in hospital services can only be through incorporation with a foreign equity ceiling of 74 percent, subject to the condition that the latest technology for treatment

[124] https://www.dataguidance.com/notes/south-korea-data-protection-overview (last accessed 7 June 2022)

will be brought in. In pharmaceutical production and R&D, restrictions are in place to ensure local investor participation (UNCTAD, 2021).

- Second, countries often cite security reasons to prohibit foreign investment outright. For example, in Myanmar, since the adoption of the Myanmar Investment Law of 2016, FDI in “medical, bio or similar technologies” is considered strategic, and is subject to approval by the Myanmar Investment Commission (UNCTAD, 2021).

- Third, there are often additional conditions/requirements that foreign companies have to fulfil, either resulting in the lack of a level playing field for foreign companies vis-à-vis domestic investors or adversely affecting their business model. For example, in China, foreign service suppliers are permitted to establish joint ventures or partly foreign-invested hospitals or clinics with Chinese partners with quantitative limitations in line with China's needs, but foreign majority ownership is permitted. In Thailand, a person or representative of the limited liability company or the legal entity that applies for a licence must be a Thai national and the Board of Directors, including those in administrative and executive positions, must be a Thai citizen domiciled in Thailand.

- Fourth, some Asia-Pacific member countries have also imposed restrictions on the type of commercial presence, foreign equity restrictions, restrictions on key foreign personnel and operational restrictions. For example, in Viet Nam, foreign service suppliers are permitted to provide services through the establishment of a 100 percent foreign-invested hospital, through joint ventures with Vietnamese partners or through a business cooperation contract. The minimum investment capital for commercial presence in hospital services must be at least $20 million for a hospital, $2 million for a polyclinic unit and $200,000 for a specialty unit. These restrictions arising from trade commitments are lower than the restrictions in an autonomous regime.

- Fifth, there is a lack of concordance between commitments in Mode 3 in the services chapter and commitments in the investment chapter of trade agreements.

Barriers to foreign investment have been summarised in Figure XIX.

Figure XIX: Barriers to Investment in Healthcare Sector

6.2.3. Mode 4 or Temporary movement of healthcare professionals related barriers

Asia-pacific countries have not opened up Mode 4 - all countries generally refer to their domestic regulations, work permits, and visa regimes. Across all trade agreements, Mode 4 is either kept 'Unbound/No commitments' or 'Unbound except as indicated in the horizontal commitments of their schedules' for all health services (see section 3.5). There are five core issues relating to supply of services through Mode 4 (temporary movement of healthcare professionals). These are:

a) Shortages of domestic healthcare professionals in the home country inhibits exports from developing country and LDCs, despite their having the potential to do so. This shortage ranges from the shortage of doctors in countries like India to the shortage of care workers for the elderly in countries like Japan. Some countries like India and the Philippines are major suppliers of nurses. India is also a major supplier of doctors, but they prefer to go to English speaking countries like the US, the UK and the Middle East (Kumar, 2012). Governments do not have precise data on the demand and supply of healthcare professionals and how to address healthcare needs arising from events like the recent pandemic.

b) The scope for mobility of healthcare professionals under existing trade agreements is limited. There are no sector-specific commitments and horizontal commitments are subject to restrictions in the form of nationality requirements,

residency requirements and non-recognition of qualifications/certificates, etc. For example, in Brunei, a foreign national may not set up private practice for the provision of general medical, specialised medical, or dental services unless the foreign national has worked in the country for at least six cumulative years as a general medical, specialised medical, or dental practitioner, which shall include three years of clinical service in a public hospital, health centre, or clinic under the Ministry of Health. This is sometimes difficult for foreign healthcare workers to comply with. In Singapore, only persons who are resident in Singapore are allowed to provide health services such as medical services, pharmacy services, deliveries and related services, nursing services, physiotherapeutic and para-medical services and allied health services, and optometry and opticianry services (ASEAN-Japan Centre, 2020).

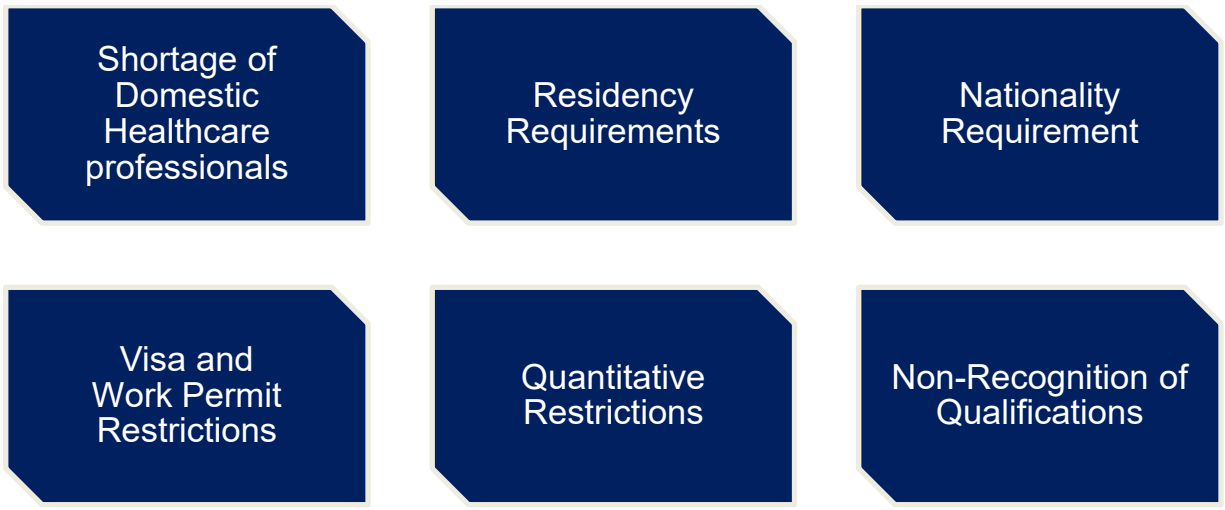
c) Only a limited number of MRAs have been signed and among these, only a few have been implemented.

d) There are some issues related to visas and work permits that affect the cross-border mobility of healthcare workers. In most countries, there is no separate visa for healthcare professionals. They are covered under the normal category of visas for professionals. For example, in Malaysia, 'the Professional Visit Pass' is the work permit visa for all professionals including health professionals; and the validity of the work permit is initially for up to two years, extendable every two years. Granting only short-term visa and work permits acts as a barrier to the movement of health professionals in Asia-Pacific countries. Besides, all categories of healthcare workers are not defined in the immigration policy

e) Another major issue for cross-border mobility of healthcare workers is the non-recognition of qualifications for both modern and traditional medicine. For example, under the Malaysian education system, nurses can go directly to a three-year diploma programme after completing the 11th year of education (i.e., no need to complete the 12-year education), which is different from the typical training for nurses in other ASEAN countries. As a result, Malaysian nurses face a challenge in obtaining licences in other ASEAN countries because their education and training are deemed 'inferior' to the requirements of the host country even if they have 30 years of practical experience. In Indonesia, foreign

nurses are permitted to work by obtaining a certificate of competency and a working permit (SIK) but practically only as specialists (i.e., nurses with skills greater than those commonly possessed by Indonesian nurses) or consultants.[125]

Figure XX: Barriers to Trade in Mode 4 Services in Healthcare Services



There are often other barriers such as language barriers.

6.3. Issues in Investment

Investment may not be covered under the trade agreement or if it is covered, health sector could be in the exclusion list or have limited coverage. They usually lack provisions specifically relating to foreign investment in the health sector. This is an issue for developing countries and LDCs that require foreign investment to develop the sector. International Investment Agreements (IIAs) have also declined globally, with only 21 IIAs being concluded in 2020 compared to almost 50 IIAs in 2010 (UNCTAD, 2021).

6.4. Universal Service Obligation versus Trade

[125] https://www.eria.org/ERIA-DP-2015-21.pdf (last accessed on 28 January 2022)

One core concern faced by countries in negotiating trade agreements and enhancing private sector presence in healthcare is related to social service obligations vis-à-vis allowing the private sector to earn profits. One way forward has been price fixing by government for pharmaceutical products, hospital services, etc.

6.5. Other Issues

6.5.1. Government Procurement and Trade Agreements

There are three core issues related to government procurement in trade agreements. These are the following:

- Apart from the low coverage of Asia-Pacific countries in the WTO GPA, countries also have low commitments in government procurement in existing trade agreements. In the Asia-Pacific, only Australia, Japan, the Republic of Korea, and the United States are party to the GPA. Large developing nations such as India and Viet Nam have an observer status.

- As governments play a key role in the healthcare sector, especially in LDCs and developing countries, the lack of a transparent government procurement agreement and non-discriminatory access to the government procurement market adversely impact trade and cross border investment flows. While developed countries have relatively good clauses to ensure transparency, clarity and non-discriminatory access to government procurement, inclusion of these processes seem to an issue for developing countries. This is an even bigger issue in countries like India, where state or provincial governments can have their own systems and processes for government procurement. Often, political parties in power are different at the centre and states, with different ideologies, making it difficult to have uniformity in government procurement processes across the country.

- Governments account for a large part of the healthcare market in the region but government procurement is not covered under many trade agreements; even if it is covered, the health sector may not be covered under government

procurement. For example, there are hardly any government procurement commitments in the RCEP.

6.5.2. Mutual Recognition Agreements

There are multiple MRAs being signed between governments and agencies at all levels, but three core issues persist. These are the following.

a) There is a lack of domestic framework and guidelines for policymakers on the basis of which they can ensure uniformity in quality, processes and standards that will help them negotiate an MRA.

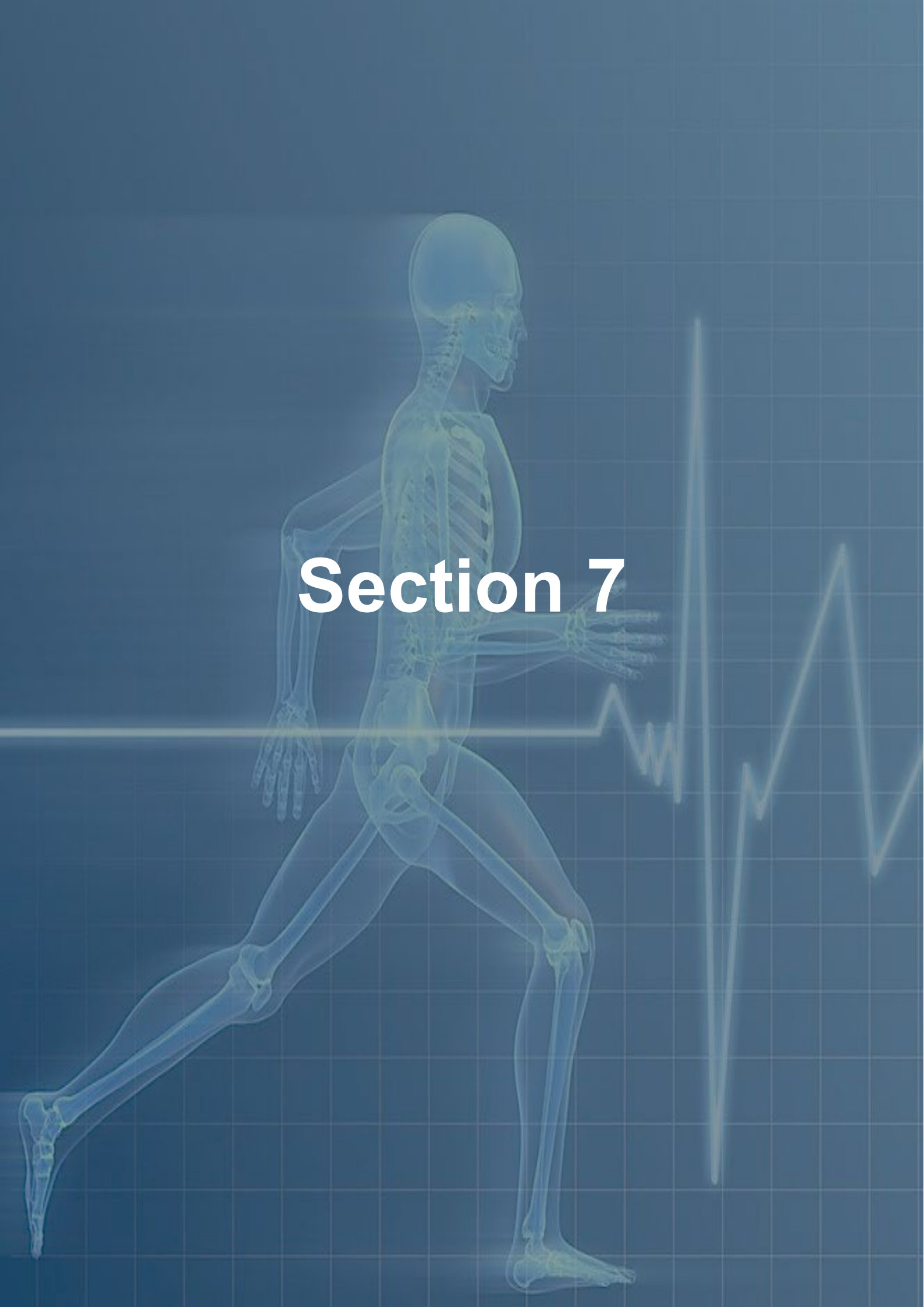
b) The limited number of MRAs that do exist have no time bound implementation period.

c) Information that can help monitor the progress and status of MRAs is often not available in the public domain.

6.6. Other Collaborations: SDG 17 Partnership for the Goals

The SDG 17 goals are not being realised properly. They require inclusive partnerships at all levels – global, regional, national, and local – to strengthen sustainable development in the health sector. The COVID-19 pandemic highlighted the lack of strong global, regional, and national partnerships. There is also a lack of public-private partnerships in the health sector. The health sector is one area that requires PPPs and private sector investment to address economic, systemic and geographic challenges.

Furthermore, most collaborations and trade agreements are north-south and there is limited south-south collaboration. One major reason for this is that while developed countries have higher standards, there is lack of clarity on standards and processes and violation of standards in LDCs and developing countries. Although the number of MoUs and MRAs signed to resolve this barrier is large, they are not properly implemented and their progress is not monitored.



Section 7

7. Way Forward and Recommendations

The discussions in the previous sections show that the Asia-Pacific region covers a wide range of countries, diverse in terms of economic size and population, growth and development, healthcare needs, governmental ability to cover healthcare expenditure, access to basic healthcare infrastructure, and availability of healthcare professionals and medical personnel. For achieving SDG 3 – Good Health and Well-Being – it is crucial that there is an open trading system in the health sector as well as more collaboration, partnerships and cooperation, both within and across countries. More emphasis on SDG 17-Partnerships for the Goals, with a focus on collaboration with the private sector, will help countries, especially LDCs and developing countries to achieve SDG 3.

Section 6 identified a number of barriers, which restrict trade, cross-border investments and collaborations. It is important for Asia-Pacific countries to commit to reducing tariff rates, remove inverted duties, and remove non-tariff barriers to trade in goods and services and barriers to investment flows. There is an urgent need to use technology and enhance access to technology through “data sharing with trust”. Protectionist measures must give way to greater collaboration between LDCs, developed and developing countries, especially to help LDCs and developing countries achieve the SDGs. Social innovation and fourth industrial revolution technologies will play a key role in future healthcare delivery and access along with private sector engagements and participation, for which appropriate regulations need to be in place. Professionals with different skills such as healthcare professionals, engineers, and data analysts need to collaborate more. Healthcare professionals have to be trained in technology. There is need for sharing of information and collaborations across regulators to facilitate recognition of quality of education and training to facilitate cross-border movements to address shortages of professionals. Multilateral organisations such as UNCTAD can support such initiatives. Besides, countries with enhanced manufacturing facilities may need to have multi-stakeholder discussions, within and across countries, on partnerships for the optimal use of such facilities in the future.

Given this background, some recommendations are made in this section that will help enhance trade and investment and facilitate greater south-south and triangular collaborations in the Asia-Pacific region.

7.1. Trade in Goods

7.1.1. Pharmaceutical and Medical Goods including Medical Devices

The participation of developing countries and LDCs in both plurilateral and bilateral trade agreements needs to be enhanced to reduce barriers to trade and give businesses a stable operating environment. Trade agreements should also include more comprehensive coverage of the health sector. This will require the following.

- Countries need to identify their sensitivities and the reasons for such sensitivity (for example, lack of domestic competitiveness) through domestic consultations and draw up strategies to address it.
- In general, autonomous tariffs for healthcare products should be low. Countries need to study both the impact of tariff reduction on domestic industry as well as how to prune the negative/exclusion list in trade agreements Consultations should involve all stakeholders (government, private, NGOs, multilateral bodies, and consumer forums) on how to enhance participation in trade agreements. LDCs may need support and funding from international organisations in capacity building for trade negotiations.
- If the sensitivity of domestic industry or their lack of competitiveness is related to issues like high logistics costs or low ease of doing business, then such issues should be addressed through domestic reform.
- While reducing tariffs, countries need to keep in mind the impact of inverted duties on domestic manufacturing. Care should be taken so that trade agreements do not lead to inverted duties.
- It is necessary to define HS codes for traditional health products for them to be covered under trade agreements. There can be a 10-digit HS code under the

category “others”. Countries like Japan use the HS 10-digit classification in trade agreements for organic products.

- To reduce distortions resulting from multiple trade agreements with different levels of tariff liberalisation, countries should lower autonomous tariffs and avoid (as far as possible) giving different commitments/concessions to different trading partners. A trade agreement may include MFN clauses so that a country can gain from the future trade agreements of their trading partners. Countries like Japan and regions like the EU put in MFN clauses in their trade agreements.

- Exclusion lists should be kept to the bare minimum. Developing countries and LDCs in particular need to review the tariff phasing out period, which are now fairly long even for critical products needed to address the COVID-19 pandemic.

7.1.2. Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT)

Domestic regulations of the Asia-Pacific countries need to align with international agreements like the WTO’s SPS and TBT agreements. The standards and requirements (like labelling requirements) have to be clearly defined and published online. The import clearance process for health products should be well-documented and available online. The following measures could help align domestic regulations to the WTO’s SPS and TBT agreements.

- There needs to be a well-defined domestic system for time-bound approval and testing of drugs, medical devices, etc. If developing countries need support in areas such as capacity building for testing authorities, laboratories, etc., that needs to be discussed with stakeholders like Drug Controllers and laboratories. In this area, multi-stakeholder consultation/collaborations may help. Multilateral organisations can also provide support for capacity building. Human resource and infrastructure shortages have to be identified and addressed.

- Trade agreements need to seek time-bound commitments for conformity of standards and processes and for regulatory co-operation. Trade agreements between developed and developing countries or LDCs can provide for capacity

building and support, and establish processes for mutual recognition of standards and testing processes, including mutual recognition of laboratories, third part certification bodies, the process of evaluation by drug controllers, etc.

- Developing countries and LDCs may need the support of multilateral organisations to negotiate regulatory commitments and to identify and address regulatory gaps.
- Countries may work with multilateral bodies like the WHO to get traditional medicines recognised. They should have domestic regulations for traditional medicines in place, learning from the best practices of countries like Thailand and China, and working closely with organisations like the WHO. China and Thailand have streamlined their domestic policies and processes and then got binding commitments in traditional medicines under their trade agreements.
- For trade negotiations and mutual recognition in traditional medicines, countries entering into trade agreements have to identify a nodal regulator/body and agree on the HS codes (which can be at the 10-digit level under the “others” category).
- A model process that countries can use as a template for the approval of medical goods and drugs can be designed. There is also need for a fast-track system for the clearance of drugs, vaccine, etc., related to health pandemics, which can be discussed under a trade agreement.
- The drug approval process should be completed within 6 months to one year and all information related to the approval process, including documents, clinical trials, and other due diligence requirements should be made available online.
- If any drug has been approved by over 25 developed and developing countries, it can go through a faster clearance process. Capacity constraints, if any, need to be addressed

7.1.3. Rules of Origin

There is a need for RoO harmonisation. With multiple FTAs, RoO need to be simple, transparent, and easy to implement. The RCEP is an example of a good RoO, which

aims to lead to some harmonisation of ROOs across the multiple bilateral agreements of the RCEP members. Other suggestions made during the KIIs include the following.

- The percentage of value-added may be lowered, which can help develop value chains in the region.
- Self-certification can be introduced to reduce delays and the costs involved in proving compliance with RoO.
- There is need for countries to have internal consultation on RoO as the views of different stakeholders like the exporting industry, user industry and industry that will face competition from imports vary.
- The RCEP has tried to harmonise RoO across the different trade agreements of its signatories. This may be looked into.
- There is limited literature on RoO and its implications for the health sector; such studies may be conducted.
- For RoO, the World Customs Organization has amended the seventh edition of HS nomenclature codes, with effect from 1 January 2022. These may be used for product classification.
- Countries should work with industries to study the entire value chain of a product before implementing the RoO.

7.1.4. Intellectual Property Rights

Some LDCs may need support from multilateral organisations to be TRIPS compliant. These are the countries that either do not participate in trade agreements or leave IPR out of the coverage of their trade agreements or have limited coverage of the health sector.

Almost all comprehensive trade agreements in the Asia-Pacific are TRIPS compliant and some of the agreements with markets like the US and EU are TRIPS plus. Developing countries need to see the implications of signing the TRIPS plus agreement. There are hardly any detailed studies on large developing countries like India, which are pharmaceutical manufacturers, on the cost and benefits of signing the

TRIPS plus agreement. Such studies need to be conducted based on detailed consultations with different stakeholders like domestic and foreign pharmaceutical companies, legal experts, consumer forums, etc.

India had raised the issue of TRIPS waiver during the pandemic. There is need for discussion in international forums and through trade agreements on TRIPS versus health pandemic management.

There is also a need for stakeholders' engagement and learning from global best practices on IPR implementation. Capacity building support from developed countries to developing countries and LDCs in partnership with organisations like the WHO for IPR implementation and monitoring will help.

Within countries, there is need for more collaboration between central, provincial and local governments and stakeholders like pharmaceutical companies, hospitals, etc. This will help identify gaps in IPR implementation and monitoring

7.1.5. Trade Facilitation

The Trade Facilitation Agreement needs to be implemented uniformly across all countries and should also be covered under trade agreements.

- Asia-Pacific countries may adopt the UNCTAD Automated System for Customs Data. Customs should be connected to allied agencies through a digital system and there should be a technology-based risk management system.
- Digital technology should be used to minimise physical intervention and reduce delays. Processes have to be streamlined and clearances have to be time-bound.
- There can be a green channel or fast-track clearances for perishable cargo. Ports of entry should have appropriate storage and testing facilities for healthcare products. This can be a part of trade agreements.
- There should be one-stop information portals to share necessary information and processes.
- Developing countries and LDCs may need support to implement the TFA. There can be collaboration among countries, within regions and between different

stakeholders like customs, allied agencies, technology firms, and multilateral bodies for digitalisation.

- Capacity building for healthcare professionals and digitalisation and cross-border collaborations can be part of trade agreements. There can be mutual recognition of authorised economic operators (AEO).

7.2. Trade in Services

7.2.1. Mode 1 or Sharing Health-related data

As countries devise their data protection regulations, there is need for a policy that protects sensitive patient data while simultaneously allowing data sharing with trust for R&D, innovation and for addressing issues like pandemic management. Within countries, the following are needed:

- Greater collaboration across different stakeholders like the health ministry, information technology ministry and law ministry along with healthcare service providers, pharmaceutical companies and technology companies to put in place a system of data sharing along with penal provisions under the law for misuse of data
- To connect health systems through technology at different levels to gather and analyse data for R&D and innovation and for better healthcare delivery and access
- A well-defined process to share clinical/diagnostic data that can be anonymised and encrypted before sharing, to meet the requirements and goals of countries and to identify gaps in and improve healthcare systems
- There is need for domestic policies in areas like use of artificial intelligence (AI) for social goods, like the health sector
- Examining the possibility of a regional framework for digital health products and services for the Asia-Pacific region and developing a model framework that includes data and information sharing with trust, support in digitalisation

and capacity building, use of digital technology to collect, collate and analyse patient data within a country and provisions to address multi-country issues like health pandemics

Additionally, as discussed above countries should make commitments in Mode 1, and have domestic regulation on sharing of patient and other health sector data for better service provision, research, etc., both within the country and with other countries. An EU GDPR type of data sharing agreement can be a starting point. In many countries, pandemic management or national disaster management regulations have a provision to override all restrictions and share data during a pandemic. Future disaster management regulations need to take that into account

7.2.2. Mode 3 or General Foreign investment related requirements

Countries and governments need to conduct discussions with stakeholders to understand the reasons for restrictions on FDI. Where they exist, limits on FDI may be relaxed for health infrastructure like hospitals, diagnosis centres/clinics, etc., to help build infrastructure in developing countries and LDCs.

The FDI policy should offer a level playing field to foreign and domestic firms of the same size, and not restrict best business models based only on ownership. If considered necessary, governments can offer subsidies or other incentives to support domestic companies. Governments can look at pricing models and social obligation requirements for private healthcare providers. However, such regulations should be generic and not part of the FDI policy.

Apart from reviewing conditions and limitations on foreign investment, LDCs and developing countries should also ensure concordance in Mode 3 commitments in healthcare services under the services and investment chapters of their trade agreements. Healthcare sector should not be in the negative list in the investment chapter.

7.2.3. Mode 4 or Temporary Movement of Healthcare Professionals

As discussed in section 5.3.3, some experts think that current relaxations in regulations on movement of professional are mostly temporary to address the current shortages. However, long-term measures like mutual recognition of degrees and

practices for healthcare workers are needed to facilitate cross-border movement. This can be achieved through the following measures.

- Countries need to map their healthcare requirements, availability of service providers, quality standards, etc., and identify their potential for export. Asia-Pacific countries can negotiate short-term bilateral arrangements to facilitate cross-border movement of health workers to mitigate temporary shortages.

- Greater international collaboration is needed in health services to help mobilise a pool of health professionals to fight emerging health issues and reduce human resource shortages.

- There is need for greater discussion for easier mobility of healthcare professionals, including independent/professional skilled healthcare workers Limitations and restrictions imposed need to be reviewed; sometimes, this may require changes in domestic regulations.

- Today, several healthcare services such as consultations with doctors can be done online and remotely. Thus, conditions on physical presence need to be reviewed

- Countries need to work with their domestic health regulators and set up a process to ensure uniformity in the quality and standards of their services, which will enable them to sign an MRA.

- Trade agreements should not only have provisions for MRAs, but also have provisions for time bound conclusion, implementation and monitoring of the MRAs.

- There should be international platform/regional level collaborations for regular discussions among healthcare regulators, certification agencies, etc. Regions and countries within regions may look at the ASEAN Qualification Framework, which was established to harmonise regulatory arrangements between the ASEAN member countries.

- Effective registration and certification systems are needed at the national and regional levels with respect to trade in medical education and health services.

- Countries may work together to introduce special visas that facilitate temporary movement of healthcare personnel for a period of 3-5 years to mitigate existing gaps.
- There is need for more discussion in international forums to mitigate healthcare worker shortages, especially shortages as witnessed during the recent pandemic. In this respect, there is need to collect data on healthcare workers by countries.

7.3. Investment

As countries sign trade agreements, they need to ensure that the agreements are comprehensive and cover investment; the health sector should also be covered under the investment chapter.

Additionally, there is need for discussion, both within and across countries in the region to identify concerns related to the signing of BITs and membership of the ICSID. A model BIT agreement may be created based on consultation. There is need for domestic consultations on ICSID. To facilitate these discussions, multilateral organisations and countries should aim to move towards plurilateral investment agreements.

7.4. Universal Service Obligation versus Trade

The government may fix the price for USO obligation but should allow payment by those who have the ability to pay for pharmaceutical products and services. This will help private hospitals and pharmaceutical manufacturers to grow and reinvest. USO obligation or subsidised healthcare for citizens can be accommodated under trade agreements.

7.5. Others

7.5.1. Government Procurement

Many developing countries and LDCs in the region are not party to the WTO's government procurement agreement; therefore, there is a need for a robust domestic public procurement policy, covering national, provincial and local governments, which can help countries sign international agreements like the WTO's GPA and attract private investment.

The following additional points may be kept in mind.

- The health sector may be covered under the government procurement chapter. Countries should commit to clear, transparent rules regarding government procurement and to sharing information on the procurement process. There should be no bias or pre-approved vendors; the bidding process should be competitive.
- Procurement at both the central and provincial government levels may be covered under trade agreements.
- There is need for consultation between different government agencies procuring healthcare products and services and other stakeholders within the country on the subject. There is limited discussion on the issue at a country level.

7.5.2. Mutual Recognition Agreements

Governments need to talk with domestic stakeholders and nodal agencies to set up a framework for uniformity of standards and processes within the country, which will help in negotiating an MRA. Under trade agreements, there should be a provision for time bound conclusion, implementation and monitoring of MRAs. Furthermore, countries that have successfully concluded MRAs should make all MRA-related information available in the public domain. They should also provide for regular updates in their trade agreements.

There is also a need for consultation with international organisations to create a model MRA framework that can be followed by developing countries and LDCs for successful MRAs and to enable them to have discussions in this area.

7.6. Other Collaborations: SDG 17 Partnership for the Goals

Countries need to focus on SDG 17, the realisation of which will help countries, especially developing countries and LDCs, achieve SDG 3 – Good Health and Well-Being. This needs partnership across stakeholders at all levels – within countries, within regions, across regions, north-south, south-south and triangular. More public-private partnerships, partnerships between healthcare companies, technology companies, governments, research organisations and NGOs and foundations, and more active regional organisations that promote collaborations among countries that could also provide a partnership framework to enable LDCs and developing countries improve private sector participation are needed. There is also need for regular consultations with international/regional organisation to help LDCs and developing countries to adopt standards needed for collaboration and trade with developed countries. Other areas for collaboration include training and capacity building, R&D, innovation and digitalisation. It is important for countries to monitor the outcomes as the number of MoUs signed increases.

To conclude, this report shows that certain initiatives (for example, addressing regulatory and procedural gaps) have to be taken at the country level; others can be at the cross-country/regional level. Regional agreements and mega-regional agreements can help facilitate trade flows and collaboration, if rightly designed. To achieve this, a draft checklist summarising these recommendations for policymakers and multilateral organisations is enclosed in Box F1 and Box F2, respectively in Appendix F.

More active participation in trade agreements and lowering the lead time for implementation would work greatly to the advantage of LDCs and developing countries. For instance, despite the rigidities in its health sector policies, Viet Nam has been forthcoming in participating in trade agreements and has gained from such participation. ASEAN as a region has progressed well in terms of enhancing trade, investment and collaborations among its members. There are several examples of best practices, given in this report that can be replicated across Asia-Pacific countries. Other regions need to learn from the ASEAN experience.

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Appendix A

- HS Code Classification for Health Products

HS codes are classified at four levels as 2/4/6/8-digit codes. Under the two-digit HS code level, pharmaceutical products are categorised as chapter 30. As the required specific and miscellaneous health sector products might be covered under various chapters, 113 product HS codes at the 4-digit level, and 493 product HS-codes at 6-digit level have been identified for product level trade data extraction (refer Table A1). At the international level, HS codes are common for all countries up to the 6-digit level. Beyond the 6-digits, HS codes can vary across countries according to their requirements.

Table A1(a): List of HS Codes (4-Digit HS Code) and Product Description for Health Products

HS-Code (4 Digit)	Product Description
2207	Undenatured ethyl alcohol of an alcoholic strength by volume of 80% vol. or higher; ethyl alcohol and other spirits, denatured, of any strength.
2208	Undenatured ethyl alcohol of an alcoholic strength by volume of less than 80 % vol.; spirits, liqueurs and other spirituous beverages.
2804	Hydrogen, rare gases and other nonmetals.
2842	Other salts of inorganic acids or peroxoacids (including aluminosilicates whether or not chemically defined), other than azides.
2847	Hydrogen peroxide, whether or not solidified with urea.
2902	Cyclic hydrocarbons.

HS-Code (4 Digit)	Product Description
2903	Halogenated derivatives of hydrocarbons.
2904	Sulphonated, nitrated or nitrosated derivatives of hydrocarbons, whether or not halogenated.
2905	Acyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives.
2906	Cyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives.
2907	Phenols; phenolalcohols.
2909	Ethers, etheralcohols, etherphenols, etheralcoholphenols, alcohol peroxides, ether peroxides, ketone peroxides (whether or not chemically defined), and their halogenated, sulphonated, nitrated or nitrosated derivatives.
2912	Aldehydes, whether or not with other oxygen function; cyclic polymers of aldehydes; paraformaldehyde.
2914	Ketones and quinones, whether or not with other oxygen function, and their halogenated, sulphonated, nitrated or nitrosated derivatives.
2915	Saturated acyclic monocarboxylic acids and their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives.
2916	Unsaturated acyclic monocarboxylic acids, cyclic monocarboxylic acids, their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives.
2917	Polycarboxylic acids, their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives.
2918	Carboxylic acids with additional oxygen function and their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives.
2920	Esters of other inorganic acids of nonmetals (excluding esters of hydrogen halides) and their salts; their halogenated, sulphonated, nitrated or nitrosated derivatives.

HS-Code (4 Digit)	Product Description
2921	Amine-function compounds.
2922	Oxygen-function amino compounds.
2923	Quaternary ammonium salts and hydroxides; lecithins and other phosphoaminolipids, whether or not chemically defined.
2924	Carboxyamide-function compounds; amide-function compounds of carbonic acid.
2925	Carboxyimide-function compounds (including saccharin and its salts) and imine-function compounds.
2926	Nitrile-function compounds.
2927	Diazo, azo or azoxy-compounds.
2928	Organic derivatives of hydrazine or of hydroxylamine.
2929	Compounds with other nitrogen function.
2930	Organo-sulphur compounds.
2931	Other organo-inorganic compounds.
2932	Heterocyclic compounds with oxygen heteroatom(s) only.
2933	Heterocyclic compounds with nitrogen heteroatom(s) only.
2936	Provitamins and vitamins, natural or reproduced by synthesis (including natural concentrates), derivatives thereof used primarily as vitamins, and intermixtures of the foregoing, whether or not in any solvent.
2937	Hormones, prostaglandins, thromboxanes and leukotrienes, natural or reproduced by synthesis; derivatives and structural analogues thereof, including chain modified polypeptides, used primarily as hormones.
2938	Glycosides, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives.

HS-Code (4 Digit)	Product Description
2939	Vegetable alkaloids, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives.
2940	Sugars, chemically pure, other than sucrose, lactose, maltose, glucose and fructose; sugar ethers, sugar acetals and sugar esters, and their salts, other than products of heading 29.37, 29.38 or 29.39.
2941	Antibiotics.
2942	Other organic compounds.
3001	Glands and other organs for organo-therapeutic uses, dried, whether or not powdered; extracts of glands or other organs or of their secretions for organo-therapeutic uses; heparin and its salts; other human or animal substances prepared for therapeutic or prophylactic uses, not elsewhere specified or included.
3002	Human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; antisera, other blood fractions and immunological products, whether or not modified or obtained by means of biotechnological processes; vaccines, toxins, cultures of micro-organisms (excluding yeasts) and other similar products; cell structures, whether or not modified.
3003	Medicaments (excluding goods of heading 30.02, 30.05 or 30.06) consisting of two or more constituents which have been mixed together for therapeutic or prophylactic uses, not put up in measured doses or in forms or packings for retail sale.
3004	Medicaments (excluding goods of heading 3002, 3005 or 3006) consisting of mixed or unmixed products for therapeutic or prophylactic uses, put up in measured doses (including those in the form of transdermal administration systems) or in forms or packing for retail sale.
3005	Wadding, gauze, bandages and similar articles (for example, dressings, adhesive plasters, poultices), impregnated or coated with pharmaceutical substances or put up in forms or packings for retail sale for medical, surgical, dental or veterinary purposes.
3006	Pharmaceutical goods specified in Note 4 to this Chapter.

HS-Code (4 Digit)	Product Description
3203	Colouring matter of vegetable or animal origin (including dyeing extracts but excluding animal black), whether or not chemically defined; preparations as specified in Note 3 to this Chapter based on colouring matter of vegetable or animal origin.
3204	Synthetic organic colouring matter, whether or not chemically defined; preparations as specified in Note 3 to this Chapter based on synthetic organic colouring matter; synthetic organic products of a kind used as fluorescent brightening agents or as luminophores, whether or not chemically defined.
3301	Essential oils (terpeneless or not), including concretes and absolutes; resinoids; extracted oleoresins; concentrates of essential oils in fats, in fixed oils, in waxes or the like, obtained by enfleurage or maceration; terpenic by-products of the deterpenation of essential oils; aqueous distillates and aqueous solutions of essential oils.
3401	Soap; organic surface-active products and preparations for use as soap, in the form of bars, cakes, moulded pieces or shapes, whether or not containing soap; organic surface-active products and preparations for washing the skin, in the form of liquid or cream and put up for retail sale, whether or not containing soap; paper, wadding, felt or nonwovens, impregnated, coated or covered with soap or detergent.
3402	Organic surface-active agents (other than soap); surface-active preparations, washing preparations (including auxiliary washing preparations) and cleaning preparations, whether or not containing soap, other than those of heading 34.01.
3701	Photographic plates and film in the flat, sensitised, unexposed, of any material other than paper, paperboard or textiles; instant print film in the flat, sensitised, unexposed, whether or not in packs.
3702	Photographic film in rolls, sensitised, unexposed, of any material other than paper, paperboard or textiles; instant print film in rolls, sensitised, unexposed.
3808	Insecticides, rodenticides, fungicides, herbicides, anti-sprouting products and plant growth regulators, disinfectants and similar products, put up in forms or packings for retail sale or as preparations or articles (for example, sulphur treated bands, wicks and candles, and fly-papers).

HS-Code (4 Digit)	Product Description
3821	Prepared culture media for the development or maintenance of microorganisms (including viruses and the like) or of plant, human or animal cells.
3822	Diagnostic or laboratory reagents on a backing, prepared diagnostic or laboratory reagents on a backing, prepared diagnostic or laboratory reagents whether or not on a backing, whether or not put up in the form of kits, other than those of heading 3006, certified reference materials.
3923	Articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics.
3926	Other articles of plastics and articles of other materials of headings 3901 to 3914.
4014	Hygienic or pharmaceutical articles (including teats), of vulcanised rubber other than hard rubber, with or without fittings of hard rubber.
4015	Articles of apparel and clothing accessories (including gloves, mittens and mitts), for all purposes, of vulcanised rubber other than hard rubber.
4803	Toilet or facial tissue stock, towel or napkin stock and similar paper of a kind used for household or sanitary purposes, cellulose wadding and webs of cellulose fibres, whether or not creped, crinkled, embossed, perforated, surface-coloured, surface- decorated or printed, in rolls or sheets.
4818	Toilet paper and similar paper, cellulose wadding or webs of cellulose fibres, of a kind used for household or sanitary purposes, in rolls of a width not exceeding 36 cm, or cut to size or shape; handkerchiefs, cleansing tissues, towels, tablecloths, serviettes, bed sheets and similar household, sanitary or hospital articles, articles of apparel and clothing accessories, of paper pulp, paper, cellulose wadding or webs of cellulose fibres.
6116	Gloves, mittens and mitts, knitted or crocheted.
6210	Garments, made up of fabrics of heading 5602, 5603, 5903, 5906 or 5907.
6216	Gloves, mittens and mitts.

HS-Code (4 Digit)	Product Description
6307	Other made up articles, including dress patterns.
6505	Hats and other headgear, knitted or crocheted, or made up from lace, felt or other textile fabric, in the piece (but not in strips), whether or not lined or trimmed; hairnets of any material, whether or not lined or trimmed.
7011	Glass envelopes (including bulbs and tubes), open, and glass parts thereof, without fittings, for electric lamps, cathode-ray tubes or the like.
7017	Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated.
7311	Containers for compressed or liquefied gas, of iron or steel.
7324	Sanitary ware and parts thereof, of iron or steel.
7613	Aluminium containers for compressed or liquefied gas.
8413	Pumps for liquids, whether or not fitted with a measuring device; liquid elevators.
8419	Machinery, plant or laboratory equipment, whether or not electrically heated (excluding furnaces, ovens and other equipment of heading 8514), for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting, distilling, rectifying, sterilising, pasteurising, steaming, drying, evaporating, vaporising, condensing or colling, other than machinery or plant of a kind used for domestic purposes; instantaneous or storage water heaters, non-electric.
8421	Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases.
8705	Special purpose motor vehicles, other than those principally designed for the transport of persons or goods (for example, breakdown lorries, crane lorries, fire fighting vehicles, concrete-mixer lorries, spraying lorries, mobile workshops, mobile radiological units).
8713	Carriages for disabled persons, whether or not motorised or otherwise mechanically propelled.

HS-Code (4 Digit)	Product Description
8714	Parts and accessories of vehicles of headings 8711 to 8713.
9001	Optical fibres and optical fibre bundles; optical fibre cables other than those of heading 8544; sheets and plates of polarising material; lenses (including contact lenses), prisms, mirrors and other optical elements, of any material, unmounted, other than such elements of glass not optically worked.
9002	Lenses, prisms, mirrors and other optical elements, of any material, mounted, being parts of or fittings for instruments or apparatus, other than such elements of glass not optically worked.
9003	Frames and mountings for spectacles, goggles or the like, and parts thereof.
9004	Spectacles, goggles and the like, corrective, protective or other.
9005	Binoculars, monoculars, other optical telescopes, and mountings therefor; other astronomical instruments and mountings therefor, but not including instruments for radioastronomy.
9006	Photographic (other than cinematographic) cameras; photographic flashlight apparatus and flashbulbs other than discharge lamps of heading 8539.
9007	Cinematographic cameras and projectors, whether or not incorporating sound recording or reproducing apparatus.
9008	Image projectors, other than cinematographic; photographic (other than cinematographic) enlargers and reducers.
9010	Apparatus and equipment for photographic (including cinematographic) laboratories, not specified or included elsewhere in this Chapter; negatoscopes; projection screens.
9011	Compound optical microscopes, including those for photomicrography, cinephotomicrography or microprojection.
9012	Microscopes other than optical microscopes; diffraction apparatus.
9013	Liquid crystal devices not constituting articles provided for more specifically in other headings; lasers, other than laser diodes; other optical appliances and instruments, not specified or included elsewhere in this Chapter.

HS-Code (4 Digit)	Product Description
9014	Direction finding compasses; other navigational instruments and appliances.
9015	Surveying (including photogrammetrical surveying), hydrographic, oceanographic, hydrological, meteorological or geophysical instruments and appliances, excluding compasses; rangefinders.
9016	Balances of a sensitivity of 5 cg or better, with or without weights.
9017	Drawing, marking out or mathematical calculating instruments (for example, drafting machines, pantographs, protractors, drawing sets, slide rules, disc calculators); instruments for measuring length, for use in the hand (for example, measuring rods and tapes, micrometers, callipers), not specified or included elsewhere in this chapter.
9018	Instruments and appliances used in medical, surgical, dental or veterinary sciences, including scintigraphic apparatus, other electromedical apparatus and sighttesting instruments.
9019	Mechano-therapy appliances; massage apparatus; psychological aptitude testing apparatus; ozone therapy, oxygen therapy, aerosol therapy, artificial respiration or other therapeutic respiration apparatus.
9020	Other breathing appliances and gas masks, excluding protective masks having neither mechanical parts nor replaceable filters.
9021	Orthopaedic appliances, including crutches, surgical belts and trusses; splints and other fracture appliances; artificial parts of the body; hearing aids and other appliances which are worn or carried, or implanted in the body, to compensate for a defect or disability.
9022	Apparatus based on the use of X-rays or of alpha, beta or gamma or other ionising radiations, whether or not for medical, surgical, dental or veterinary uses, including radiography or radiotherapy apparatus, X-ray tubes and other X-ray generators, high tension generators, control panels and desks, screens, examination or treatment tables, chairs and the like.
9023	Instruments, apparatus and models, designed for demonstrational purposes (for example, in education or exhibitions), unsuitable for other uses.

HS-Code (4 Digit)	Product Description
9024	Machines and appliances for testing the hardness, strength, compressibility, elasticity or other mechanical properties of materials (for example, metals, wood, textiles, paper, plastics).
9025	Hydrometers and similar floating instruments, thermometers, pyrometers, barometers, hygrometers and psychrometers, recording or not, and any combination of these instruments.
9026	Instruments and apparatus for measuring or checking the flow, level, pressure or other variables of liquids or gases (for example, flow meters, level gauges, manometers, heat meters), excluding instruments and apparatus of heading 9014, 9015, 9028 or 9032.
9027	Instruments and apparatus for physical or chemical analysis (for example, polarimeters, refractometers, spectrometers, gas or smoke analysis apparatus); instruments and apparatus for measuring or checking viscosity, porosity, expansion, surface tension or the like; instruments and apparatus for measuring or checking quantities of heat, sound or light (including exposure meters); microtomes.
9028	Gas, liquid or electricity supply or production meters, including calibrating meters therefor.
9029	Revolution counters, production counters, taximeters, mileometers, pedometers and the like; speed indicators and tachometers, other than those of heading 9014 or 90.15; stroboscopes.
9030	Oscilloscopes, spectrum analysers and other instruments and apparatus for measuring or checking electrical quantities, excluding meters of heading 9028; instruments and apparatus for measuring or detecting alpha, beta, gamma, X-ray, cosmic or other ionising radiations.
9031	Measuring or checking instruments, appliances and machines, not specified or included elsewhere in this Chapter; profile projectors.
9032	Automatic regulating or controlling instruments and apparatus.
9033	Parts and accessories (not specified or included elsewhere in this Chapter) for machines, appliances, instruments or apparatus of Chapter 90.

HS-Code (4 Digit)	Product Description
9108	Watch movements, complete and assembled.
9401	Seats (other than those of heading 94.02), whether or not convertible into beds, and parts thereof.
9402	Medical, surgical, dental or veterinary furniture (for example, operating tables, examination tables, hospital beds with mechanical fittings, dentists' chairs); barbers' chairs and similar chairs, having rotating as well as both reclining and elevating moments; parts of the foregoing articles.
9403	Other furniture and parts thereof.

Source: Compiled from (1) World Integrated Trade Solution (WITS), Available at *https://wits.worldbank.org/referencedata.html*; (2) Helble, Matthias (2012)): More trade for better health? International trade and tariffs on health products, WTO Staff Working Paper, No. ERSD-2012-17, World Trade Organization (WTO), Geneva, Available at http://dx.doi.org/10.30875/4bfd1f50-en; (3) Trade in healthcare products, Available at https://trade.ec.europa.eu/doclib/docs/2020/june/tradoc_158776.pdf (last accessed on 29 October 2021

Table A1(b): List of HS Codes (6-Digit HS Code) and Product Description for Health Products

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
220710	Alcohol solution
220890	Alcohol solution
280440	Medical oxygen

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
284210	Double or complex silicates of inorganic acids or peroxoacids, ncl. aluminosilicates whether or not chemically defined (excl. inorganic or organic compounds of mercury)
284290	Salts of inorganic acids or peroxoacids (excl. of oxometallic or peroxometallic acids, double or complex silicates [incl. aluminosilicates whether or not chemically defined], azides, and inorganic or organic compounds of mercury)
284700	Hydrogen peroxide in bulk
290290	Cyclic hydrocarbons (excl. cyclanes, cyclenes, benzene, toluene, xylenes, styrene, ethylbenzene and cumene)
290349	Halogenated derivatives of acyclic hydrocarbons with two or more different halogens (excl. perhalogenated derivatives)
290369	Halogenated derivatives of aromatic hydrocarbons (excl. chlorobenzene, o- dichlorobenzene and p-dichlorobenzene, hexachlorobenzene [ISO] and DDT [ISO] [clofenotane [INN], "1,1,1-trichloro-2,2-bis[p-chlorophenyl]ethane")
290410	Derivatives of hydrocarbons containing only sulpho groups, their salts and ethyl esters
290490	Sulphonated, nitrated or nitrosated derivatives of hydrocarbons, whether or not halogenated (excl. those containing only sulpho, nitro or nitroso groups)
290522	Acyclic terpene alcohols
290529	Unsaturated monohydric acyclic alcohols (excl. acyclic terpene alcohols)
290619	Cyclanic, cyclenic or cycloterpenic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. menthol, cyclohexanol, methylcyclohexanols, dimethylcyclohexanols, sterols and inositols)
290629	Aromatic cyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. benzyl alcohol)

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
290729	Polyphenols and phenol-alcohols (excl. resorcinol and hydroquinone "quinol" and their salts, and 4,4''-isopropylidenediphenol "bisphenol A, diphenylolpropane" and its salts)
290919	Acyclic ethers and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. diethyl ether)
290930	Aromatic ethers and their halogenated, sulphonated, nitrated or nitrosated derivatives
290949	Ether-alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. 2,2''-Oxydiethanol "diethylene glycol, digol" and monoalkylethers of ethylene glycol or of diethylene glycol)
290950	Ether-phenols, ether-alcohol-phenols and their halogenated, sulphonated, nitrated or nitrosated derivatives
291229	Cyclic aldehydes, without other oxygen function (excl. benzaldehyde)
291249	Aldehyde-ethers, aldehyde-phenols and aldehydes with other oxygen function (excl. ethylvanillin "3-ethoxy-4-hydroxybenzaldehyde" and vanillin "4-hydroxy-3- methoxybenzaldehyde")
291419	Acyclic ketones, without other oxygen function (excl. acetone, butanone "methyl ethyl ketone" and 4-Methylpentan-2-one "Methyl isobutyl ketone")
291440	Ketone-alcohols and ketone-aldehydes
291469	Quinones (excl. anthraquinone)
291539	Esters of acetic acid (excl. ethyl, vinyl, n-butyl and dinoseb [ISO] acetates)
291550	Propionic acid, its salts and esters
291590	Saturated acyclic monocarboxylic acids, their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. formic acid and acetic acid, mono-, di- or

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
	trichloroacetic acids, proprionic acid, butanoic and pentanoic acids, palmitic and stearic acids, their salts and esters, and acetic anhydride)
291619	Unsaturated acyclic monocarboxylic acids, their anhydrides, halides, peroxides, peroxyacids and halogenated, sulphonated, nitrated or nitrosated derivatives (excl. acrylic acid and its salts and esters, methacrylic acid and its salts and esters, and oleic, linoleic or linolenic acids, their salts and esters)
291620	Cyclanic, cyclenic or cycloterpenic monocarboxylic acids, their anhydrides, halides, peroxides, peroxyacids and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. inorganic or organic compounds of mercury)
291639	Aromatic monocarboxylic acids, their anhydrides, halides, peroxides, peroxyacids and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. benzoic acid, its salts and esters, benzoyl peroxide, benzoyl chloride, binapacryl [ISO], phenylacetic acid, its salts and esters, and inorganic or organic compounds of mercury)
291713	Azelaic acid, sebacic acid, their salts and esters
291719	Acyclic polycarboxylic acids, their anhydrides, halides, peroxides, peroxyacids and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. oxalic acid, its salts and esters adipic acid, its salts and esters, azelaic acid, sebacic acid, their salts and esters, maleic anhydride, and inorganic or organic compounds of mercury)
291734	Esters of orthophthalic acid (excl. dioctyl, dinonyl or didecyl orthophthalates)
291739	Aromatic polycarboxylic acids, their anhydrides, halides, peroxides, peroxyacids and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. esters of orthophthalic acid, phthalic anhydride, terephthalic acid and its salts and dimethyl terephthalate)
291811	Lactic acid, its salts and esters (excl. inorganic or organic compounds of mercury)
291813	Salts and esters of tartaric acid

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
291816	Gluconic acid, its salts and esters
291819	Carboxylic acids with additional oxygen function and their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. lactic acid, tartaric acid, citric acid, gluconic acid and their salts and esters, and chlorobenzilate [ISO])
291822	o-Acetylsalicylic acid, its salts and esters
291823	Esters of salicylic acid and their salts (excl. o-acetylsalicylic acid, its salts and esters)
291829	Carboxylic acids with phenol function but without other oxygen function, their anhydrides, halides, peroxides, peroxyacids and their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. salicylic acid and o-Acetylsalicylic acid, and their salts and esters)
291830	Carboxylic acids with aldehyde or ketone function but without other oxygen function, their anhydrides, halides, peroxides, peroxyacids and their halogenated, sulphonated, nitrated or nitrosated derivatives
292090	Esters of other inorganic acids of non-metals and their salts; their halogenated, sulphonated, nitrated or nitrosated derivatives (excl. esters of hydrogen halides, and thiophosphoric esters "phosphorothioates", their salts and their halogenated, sulphonated, nitrated or nitrosated derivatives, and inorganic or organic compounds of mercury))
292119	Acyclic monoamines and their derivatives; salts thereof (excl. methylamine, dimethylamine, trimethylamine, and their salts)
292129	Acyclic polyamines and their derivatives; salts thereof (excl. ethylenediamine and hexamethylenediamine, and their salts)
292130	Cyclanic, cyclenic or cycloterpenic mono- or polyamines, and their derivatives; salts thereof

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
292142	Aniline derivatives and their salts
292149	Aromatic monoamines and derivatives; salts thereof (excl. aniline, toluidines, diphenylamine, 1-naphthylamine "alpha-naphthylamine", 2-naphthylamine "beta- naphthylamine" and their derivatives, and salts thereof, and amfetamine "INN", benzfetamine "INN", dexamfetamine "INN", etilamfetamine "INN", fencamfamine "INN", lefetamine "INN", levamfetamine "INN", mefenorex "INN" and phentermine "INN", and salts thereof)
292159	Aromatic polyamines and their derivatives; salts thereof (excl. o-phenylenediamine, m- phenylenediamine, p-phenylenediamine or diaminotoluenes and their derivatives, and salts thereof)
292211	Monoethanolamine and its salts
292219	Amino-alcohols, their ethers and esters; salts thereof (other than those containing > one kind of oxygen function and excl. monoethanolamine, diethanolamine, triethanolamine, dextropropoxyphene "INN", and salts thereof)
292229	Amino-naphthols and other amino-phenols, their ethers and esters; salts thereof (excl. those containing > one kind of oxygen function; aminohydroxynaphthalenesulphonic acids and their salts)
292241	Lysine and its esters; salts thereof
292249	Amino-acids and their esters; salts thereof (excl. those with > one kind of oxygen function, lysine and its esters, and salts thereof, and glutamic acid, anthranilic acid, tilidine "INN", and salts thereof)
292250	Amino-alcohol-phenols, amino-acid-phenols and other amino-compounds with oxygen function (excl. amino-alcohols, amino-naphthols and other amino-phenols, their ethers and esters and salts thereof, amino-aldehydes, amino-ketones and amino-quinones, and salts thereof, amino-acids and their esters and salts thereof)
292310	Choline and its salts

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
292390	Quaternary ammonium salts and hydroxides (excl. choline and its salts)
292429	Cyclic amides, incl. cyclic carbamates, and their derivatives; salts thereof (excl. ureines and their derivatives, salts thereof, 2-acetamidobenzoic acid "N-acetylanthranilic acid" and its salts and ethinamate "INN")
292519	Imides and their derivatives; salts thereof (excl. saccharin and its salts, glutethimide [INN] and inorganic or organic compounds of mercury)
292690	Nitrile-function compounds (excl. acrylonitrile, 1-cyanoguanidine "dicyandiamide", fenproporex "INN" and its salts, and methadone "INN"-intermediate "4-cyano-2- dimethylamino-4,4-diphenylbutane")
292700	Diazo-, azo- or azoxy-compounds
292800	Organic derivatives of hydrazine or of hydroxylamine
292990	Compounds with nitrogen function (excl. amine-function compounds; oxygen-function amino-compounds; quaternary ammonium salts and hydroxides; lecithin and other phosphoaminolipids; carboxyamide-function compounds; amide-function compounds of carbonic acid; carboxyimide-function, imine-function or nitrile-function compounds; diazo-, azo- or azoxy-compounds; organic derivatives of hydrazine or of hydroxylamine and isocyanates)
293090	Organo-sulphur compounds (excl. thiocarbamates and dithiocarbamates, thiuram mono-, di- or tetrasulphides, methionine, captafol [ISO] and methamidophos [ISO])
293100	Separate chemically defined organo-inorganic compounds (excl. organo-sulphur compounds and those of mercury)
293299	Heterocyclic compounds with oxygen hetero-atom[s] only (excl. compounds containing unfused furan ring, whether or not hydrogenated, in the structure, and lactones, isosafrole, 1-[1,3-benzodioxol-5-yl]propan-2-one, piperonal,safrole, tetrahydrocannabinols "all isomers", and inorganic or organic compounds of mercury)

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
293311	Phenazone "antipyrin" and its derivatives
293321	Hydantoin and its derivatives
293329	Heterocyclic compounds with nitrogen hetero-atom[s] only, containing an unfused imidazole ring, whether or not hydrogenated, in the structure (excl. hydantoin and its derivatives)
293359	Heterocyclic compounds with nitrogen hetero-atom[s] only, containing a pyrimidine ring, whether or not hydrogenated, or piperazine ring in the structure (excl. malonylurea "barbituric acid" and its derivatives, allobarbital "INN", amobarbital "INN", barbital "INN", butalbital "INN", butobarbital "INN", cyclobarbital "INN", methylphenobarbital "INN", pentobarbital "INN", phenobarbital "INN", secbutabarbital "INN", secobarbital "INN", vinylbital "INN", loprazolam "INN", mecloqualone "INN", methaqualone "INN" and zipeprol "INN", and salts thereof)
293369	Heterocyclic compounds with nitrogen hetero-atom[s] only, containing an unfused triazine ring, whether or not hydrogenated, in the structure (excl. melamine)
293610	Provitamins, unmixed
293621	Vitamins A and their derivatives, used primarily as vitamins
293622	Vitamin B1 and its derivatives, used primarily as vitamins
293623	Vitamin B2 and its derivatives, used primarily as vitamins
293624	D-Pantothenic or DL-pantothenic acid "Vitamin B3 or B5" and their derivatives, used primarily as vitamins
293625	Vitamin B6 and its derivatives, used primarily as vitamins
293626	Vitamin B12 and its derivatives, used primarily as vitamins
293627	Vitamin C and its derivatives, used primarily as vitamins

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
293628	Vitamin E and its derivatives, used primarily as vitamins
293629	Vitamins and their derivatives, used primarily as vitamins, unmixed (excl. vitamins A, B1, B2, B3, B5, B6, B12, C, E and their derivatives)
293690	Provitamins and mixtures of vitamins, of provitamins or of concentrates, whether or not in any solvent, and natural concentrates
293710	Pituitary "anterior" or similar hormones, and derivatives, used primarily as hormones
293711	Somatropin, its derivatives and structural analogues, used primarily as hormones
293712	Insulin and its salts, used primarily as hormones
293719	Polypeptide hormones, protein hormones and glycoprotein hormones, their derivatives and structural analogues, used primarily as hormones (excl. somatropin, its derivatives and structural analogues, and insulin and its salts)
293721	Cortisone, hydrocortisone, prednisone "dehydrocortisone" and prednisolone "dehydrohydrocortisone"
293722	Halogenated derivatives of corticosteroidal hormones
293723	Oestrogens and progestogens
293729	Steroidal hormones, their derivatives and structural analogues, used primarily as hormones (excl. cortisone, hydrocortisone, prednisone "dehydrocortisone", prednisolone "dehydrohydrocortisone", halogenated derivatives of corticosteroidal hormones, oestrogens and progestogens)
293731	Epinephrine
293739	Catecholamine hormones, their derivatives and structural analogues, used primarily as hormones (excl. epinephrine)

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
293740	Amino-acid derivatives, used primarily as hormones
293750	Prostaglandins, thromboxanes and leukotrienes, their derivatives and structural analogues, used primarily as hormones
293790	Hormones, natural or reproduced by synthesis; derivatives and structural analogues thereof, used primarily as hormones (excl. polypeptide hormones, protein hormones, glycoprotein hormones, steroidal hormones, catecholamine hormones, prostaglandins, thromboxanes and leukotrienes, their derivatives and structural analogues, and amino-acid derivatives)
293791	Insulin and its salts
293792	Oestrogens and progestogens
293799	Hormones and their derivatives used primarily as hormones (excl. pituitary "anterior" or similar hormones and their derivatives, adrenal cortical hormones and their derivatives, insulin and its salts, oestrogens and progestogens)
293810	Rutoside "rutin" and its derivatives
293890	Glycosides, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives (excl. rutoside "rutin" and its derivatives)
293910	Alkaloids of opium and their derivatives; salts thereof
293911	Concentrates of poppy straw; buprenorphine "INN", codeine, dihydrocodeine "INN", ethylmorphine, etorphine "INN", heroin, hydrocodone "INN", hydromorphone "INN", morphine, nicomorphine "INN", oxycodone "INN", oxymorphone "INN", pholcodine "INN", thebacon "INN" and thebaine, and salts thereof
293919	Alkaloids of opium and their derivatives, and salts thereof (excl. concentrates of poppy straw; buprenorphine "INN", codeine, dihydrocodeine "INN", ethylmorphine, etorphine "INN", heroin, hydrocodone "INN", hydromorphone "INN",

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
	morphine, nicomorphine "INN", oxycodone "INN", oxymorphone "INN", pholcodine "INN", thebacon "INN" and thebaine, and salts thereof)
293920	Alkaloids of cinchona and their derivatives; salts thereof
293921	Quinine and its salts
293929	Alkaloids of cinchons and their derivatives; salts thereof (excl. quinine and its salts)
293930	Caffeine and its salts
293940	Ephedrines and their salts
293941	Ephedrine and its salts
293942	Pseudoephedrine "INN" and its salts
293943	Cathine "INN" and its salts
293944	Norephedrine and its salts
293949	Ephedrines and their salts (excl. ephedrine, pseudoephedrine "INN", cathine "INN", and salts thereof)
293950	Theophylline and aminophylline "theophylline-ethylenediamine" and their derivatives; salts thereof
293951	Fenetylline "INN" and its salts
293959	Theophylline and aminophylline "theophylline-ethylenediamine" and their derivatives, and salts thereof (excl. fenetylline "INN" and its salts)
293960	Alkaloids of rye ergot and their derivatives; salts thereof

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
293961	Ergometrine "INN" and its salts
293962	Ergotamine "INN" and its salts
293963	Lysergic acid and its salts
293969	Alkaloids of rye ergot and their derivatives; salts thereof (excl. lysergic acid, ergotamine and ergometrine, and their salts)
293970	Nicotine and its salts
293971	cocaine, ecgonine, levometamfetamine, metamfetamine "inn", metamfetamine racemate, and salts, esters and other derivatives thereof
293979	vegetable alkaloids, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives (excl. alkaloids of opium, alkaloids of cinchons, theophylline, aminophylline "theophylline-ethylenediamine" alkaloids of rye ergot and their salts and derivatives, cocaine, ecgonine, levometamfetamine, metamfetamine "inn", metamfetamine racemate, and salts, esters and other derivatives thereof, caffeine and ephedrines, and their salts)
293980	non-vegetal alkaloids, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives
293990	Vegetable alkaloids, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives (excl. alkaloids of opium, alkaloids of cinchons, theophylline, aminophylline "theophylline-ethylenediamine" alkaloids of rye ergot and their sa
293991	Cocaine, ecgonine, levometamfetamine, metamfetamine "INN", metamfetamine racemate, and salts, esters and other derivatives thereof
293999	Vegetable alkaloids, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives (excl. alkaloids of opium, alkaloids of cinchons, theophylline, aminophylline "theophylline-ethylenediamine" alkaloids

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
	of rye ergot and their salts and derivatives, cocaine, ecgonine, levometamfetamine, metamfetamine "INN", metamfetamine racemate, and salts, esters and other derivatives thereof caffeine and ephedrines, and their salts)
294000	Sugars, chemically pure (excl. sucrose, lactose, maltose, glucose and fructose); sugar ethers, sugar acetals and sugar esters, and their salts (excl. natural or reproduced by synthesis, provitamins, vitamins, hormones, glycosides, vegetable alkaloids and their salts, ethers, esters and other derivatives)
294110	Penicillins and their derivatives with a penicillanic acid structure; salts thereof
294120	Streptomycins and their derivatives; salts thereof
294130	Tetracyclines and their derivatives; salts thereof
294140	Chloramphenicol and its derivatives; salts thereof
294150	Erythromycin and its derivatives; salts thereof
294190	Antibiotics (excl. penicillins and their derivatives with a penicillanic acid structure, salts thereof, streptomycins, tetracyclines, chloramphenicol and erythromycin, their derivatives and salts thereof)
294200	Separate chemically defined organic compounds, n.e.s.
300110	Dried glands and other organs for organo-therapeutic uses, whether or not powdered
300120	Extracts of glands or other organs or of their secretions, for organo-therapeutic uses
300190	Dried glands and other organs for organo-therapeutic uses, whether or not powdered; heparin and its salts; other human or animal substances prepared for therapeutic or prophylactic uses, n.e.s.
300210	Antisera and other blood fractions and modified immunological products, whether or not obtained by means of biotechnological processes

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
300211	malaria diagnostic test kits
300212	antisera and other blood fractions
300213	immunological products, unmixed, not put up in measured doses or in forms or packings for retail sale
300214	immunological products, mixed, not put up in measured doses or in forms or packings for retail sale
300215	COVID-19 Test kits/ Instruments, apparatus used in Diagnostic Testing
300219	immunological products, n.e.s. (code possibly empty, preceding subheadings seem exhaustive)
300220	Vaccines for human medicine
300230	Vaccines for veterinary medicine
300231	(-1995) Vaccines against foot-and-mouth disease
300239	(-1995) Other
300290	Human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; toxins, cultures of micro-organisms and similar products (excl. yeasts and vaccines)
300310	Medicaments containing penicillins or derivatives thereof with a penicillanic acid structure, or streptomycins or derivatives thereof, not in measured doses or put up for retail sale
300320	Medicaments containing antibiotics, not in measured doses or put up for retail sale (excl. medicaments containing penicillins or derivatives thereof with a penicillanic acid structure, or streptomycins or derivatives thereof)
300331	Medicaments containing insulin, not in measured doses or put up for retail sale

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
300339	Medicaments containing hormones or steroids used as hormones, not containing antibiotics, not in measured doses or put up for retail sale (excl. those containing insulin)
300340	Medicaments containing alkaloids or derivatives thereof, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
300341	medicaments containing ephedrine or its salts, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
300342	medicaments containing pseudoephedrine "inn" or its salts, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
300343	medicaments containing norephedrine or its salts, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
300349	medicaments containing alkaloids or derivatives thereof, not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale (excl. containing ephedrine, pseudoephedrine "inn", norephedrine or their salts)
300360	medicaments containing any of the following antimalarial active principles: artemisinin "inn" for oral ingestion combined with other pharmaceutical active ingredients, or amodiaquine "inn"; artelinic acid or its salts; artenimol "inn"; artemotil "inn"; artemether "inn"; artesunate "inn"; chloroquine "inn"; dihydroartemisinin "inn"; lumefantrine "inn"; mefloquine "inn"; piperaquine "inn"; pyrimethamine "inn" or sulfadoxine "inn", not containing hormones, steroids used as hormones or antibiotics, not in measured doses or put up for retail sale
300390	Medicaments consisting of two or more constituents mixed together for therapeutic or prophylactic uses, not in measured doses or put up for retail sale (excl. antibiotics containing hormones or steroids used as hormones, but not containing antibiotics, alkaloids or derivatives thereof, hormones or antibiotics, or goods of heading 3002, 3005 or 3006)

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
300410	Medicaments containing penicillins or derivatives thereof with a penicillanic acid structure, or streptomycins or derivatives thereof, put up in measured doses "incl. those in the form of transdermal administration" or in forms or packings for retail sale
300420	Medicaments containing antibiotics, put up in measured doses "incl. those in the form of transdermal administration" or in forms or packings for retail sale (excl. medicaments containing penicillins or derivatives thereof with a penicillanic structure, or streptomycines or derivatives thereof)
300431	Medicaments containing insulin but not antibiotics, put up in measured doses "incl. those in the form of transdermal administration" or in forms or packings for retail sale
300432	Medicaments containing corticosteroid hormones, their derivatives or structural analogues but not antibiotics, put up in measured doses "incl. those in the form of transdermal administration" or in forms or packings for retail sale
300439	Medicaments containing hormones or steroids used as hormones but not antibiotics, put up in measured doses "incl. those in the form of transdermal administration" or in forms or packings for retail sale (excl. medicaments containing insulin or corticosteroid hormones, their derivatives or structural analogues)
300440	Medicaments containing alkaloids or derivatives thereof, not containing hormones, steroids used as hormones or antibiotics, put up in measured doses "incl. those in the form of transdermal administration" or in forms or packings for retail sale
300441	medicaments containing ephedrine or its salts, not containing hormones, steroids used as hormones or antibiotics, put up in measured doses "incl. those for transdermal administration" or in forms or packings for retail sale
300442	medicaments containing pseudoephedrine "inn" or its salts, not containing hormones, steroids used as hormones or antibiotics, put up in measured doses "incl. those for transdermal administration" or in forms or packings for retail sale

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
300443	medicaments containing norephedrine or its salts, not containing hormones, steroids used as hormones or antibiotics, put up in measured doses "incl. those for transdermal administration" or in forms or packings for retail sale
300449	medicaments containing alkaloids or derivatives thereof, not containing hormones, steroids used as hormones or antibiotics, put up in measured doses "incl. those for transdermal administration" or in forms or packings for retail sale (excl. containing ephedrine, pseudoephedrine "inn", norephedrine or their salts)
300450	Medicaments containing provitamins, vitamins, incl. natural concentrates and derivatives thereof used primarily as vitamins, put up in measured doses "incl. those in the form of transdermal administration" or in forms or packings for retail sale
300460	medicaments containing any of the following antimalarial active principles: artemisinin "inn" for oral ingestion combined with other pharmaceutical active ingredients, or amodiaquine "inn"; artelinic acid or its salts; artenimol "inn"; artemotil "inn"; artemether "inn"; artesunate "inn"; chloroquine "inn"; dihydroartemisinin "inn"; lumefantrine "inn"; mefloquine "inn"; piperaquine "inn"; pyrimethamine "inn" or sulfadoxine "inn", put up in measured doses "incl. those for transdermal administration" or in forms or packings for retail sale (excl. containing antibiotics, hormones, alkaloids, provitamins, vitamins, or their derivatives)
300490	Hydrogen peroxide presented as a medicament
300510	Adhesive dressings and other articles having an adhesive layer
300590	Wadding, gauze, bandages, cotton sticks and similar articles
300610	Sterile surgical catgut, similar sterile suture materials, incl. sterile absorbable surgical or dental yarns, and sterile tissue adhesives for surgical wound closure; sterile laminaria and sterile laminaria tents; sterile absorbable surgical or dental haemostatics; sterile surgical or dental adhesion barriers, whether or not absorbable
300620	Reagents for determining blood groups or blood factors

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
300630	Opacifying preparations for X-ray examinations; diagnostic reagents designed to be administered to the patient
300640	Dental cements and other dental fillings; bone reconstruction cements
300650	Firstaid boxes and kits
300660	Chemical contraceptive preparations based on hormones, prostaglandins, thromboxanes, leukotrienes, derivatives and structural analogues thereof or on spermicides
300670	Gel preparations designed to be used in human or veterinary medicine as a lubricant for parts of the body for surgical operations or physical examinations or as a coupling agent between the body and medical instruments
300680	(2002-2006) - Waste pharmaceuticals
300691	Appliances identifiable for ostomy use
300692	Waste pharmaceuticals
320300	Colouring matter of vegetable or animal origin, incl. dye extracts (excl. animal black), whether or not chemically defined; preparations based on colouring matter of vegetable or animal origin of a kind used to dye fabrics or produce colorant preparations (excl. preparations of heading 3207, 3208, 3209, 3210, 3213 and 3215)
320419	Synthetic organic colouring matter (excl. disperse dyes, acid dyes, mordant dyes, basic dyes, direct dyes, vat dyes and reactive dyes and organic pigments); preparations of the kind used for colouring any materials or for the production of prepared colours, based thereon (excl. preparations in heading 3207, 3208, 3209, 3210, 3212, 3213 and 3215); mixtures of colouring matter in subheading 3204.11 to 3204.19
330111	(-2006) -- Of bergamot - therapeutic products
330112	-- Of orange - therapeutic products

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
330113	-- Of lemon - therapeutic products
330114	(-2006) -- Of lime - therapeutic products
330119	-- Other
330121	(-2006) -- Of geranium
330122	(-2006) -- Of jasmin therapeutic products
330123	(-2006) -- Of lavender or of lavandin therapeutic products
330124	-- Of peppermint (Mentha piperita)
330125	-- Of other mints therapeutic products
330126	(-2006) -- Of vetiver
330129	-- Other
330130	- Resinoids
330190	- Other
340111	Soap
340119	soap and organic surface-active products and preparations, in the form of bars, cakes, moulded pieces or shapes, and paper, wadding, felt and nonwovens, impregnated, coated or covered with soap or detergent (excl. those for toilet use, incl. medicated products)
340120	Soap

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
340130	organic surface-active products and preparations for washing the skin, in the form of liquid or cream and put up for retail sale, whether or not containing soap
340212	cationic organic surface-active agents, whether or not put up for retail sale (excl. soap)
370110	photographic plates and film in the flat, sensitised, unexposed, for x-ray (excl. of paper, paperboard or textiles)
370210	photographic film in rolls, unexposed, for x-ray (excl. of paper, paperboard or textiles)
380894	Hand sanitizer
382100	Swab and Viral transport medium set
382200	COVID-19 Test kits
392329	Plastic hazardous waste disposal bags
392620	Gloves; Face and eye protection; protective garments
392690	Urine bags
401410	- Sheath contraceptives
401490	- Other
401511	Surgical (Gloves etc.)
401519	Gloves
401590	Protective unisex garments made of rubber sheeting, textile reinforced rubber or textile backed rubber.

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
480300	Toilet or facial tissue stock, towel or napkin stock and similar paper of a kind used for household or sanitary purposes, cellulose wadding and webs of cellulose fibres, whether or not creped, crinkled, embossed, perforated, surface-coloured, surface- de
481810	-Toilet paper
481820	- Handkerchiefs, cleansing or facial tissues and towels
481830	-Tablecloths and serviettes
481840	(-2011) - Sanitary towels and tampons, napkins and napkin liners for babies and similar sanitary articles
481850	Articles of apparel and clothing accessories
481890	Paper bed sheets
611610	Gloves
621010	Protective garments for surgical/medical use
621050	Protective garment for surgical / medical use
621600	Gloves
630790	Face and eye protection
650500	Disposable hair nets
701120	- For cathode-ray tubes

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
701710	laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated, of fused quartz or other fused silica (excl. containers for the conveyance or packing of goods, measuring, checking or medical instruments and apparatus of chapter 90)
701720	laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated, having a linear coefficient of expansion <= 5 x 10 -6 per kelvin within a temperature range of 0°c to 300°c (excl. glass of fused quartz or other fused silica, containers for the conveyance or packing of goods, measuring, checking or medical instruments and apparatus of chapter 90)
701790	laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated (excl. glass having a linear coefficient of expansion <= 5 x 10 -6 per kelvin within a temperature range of 0°c to 300°c or of fused quartz or other fused silica, containers for the conveyance or packing of goods, measuring, checking or medical instruments and apparatus of chapter 90)
731100	Empty medical gas cylinders, portable, for oxygen, fitted with a valve and a pressure and flow regulator
732490	Kidney basins
761300	Empty medical gas cylinders, portable, for oxygen, fitted with a valve and a pressure and flow regulator
841319	Infusion pump
841920	Medical, surgical or laboratory sterilisers, including autoclaves
842139	Pressure Swing Adsorption (PSA) oxygen plant for a central oxygen supply system of medical grade oxygen.
870590	Mobile clinic vehicles
871310	Wheelchairs
871390	Wheelchairs

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
871420	parts and accessories for carriages for disabled persons, n.e.s.
900110	Optical fibres, optical fibre bundles and cables
900120	Sheets and plates of polarising material
900130	Contact lenses
900140	Spectacle lenses of glass
900150	Spectacle lenses of other materials
900190	Other
900211	For cameras, projectors or photographic enlargers or reducers
900219	Other
900220	Filters
900290	Other
900390	Parts
900490	Face and eye protection
900510	Binoculars
900580	Other instruments
900590	Parts and accessories (including mountings)

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
900610	Cameras of a kind used for preparing printing plates or cylinders
900630	Cameras specially designed for underwater use, for aerial survey or for medical or surgical examination of internal organs; comparison cameras for forensic or criminological purposes
900691	For cameras
900699	Other
900720	Projectors
900791	For cameras
900792	For projectors
900850	Projectors, enlargers and reducers
900890	Parts and accessories
901010	Apparatus and equipment for automatically developing photographic (including cinematographic) film or paper in rolls or for automatically exposing developed film to rolls of photographic paper
901050	Other apparatus and equipment for photographic (including cinematographic) laboratories; negatoscopes
901060	Projection screens
901090	Parts and accessories
901110	Stereoscopic optical microscopes
901120	Other microscopes, for photomicrography, cinephotomicrography or microprojection

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
901180	Optical microscopes (excl. for photomicrography, cinephotomicrography or microprojection, stereoscopic microscopes, binocular microscopes for ophthalmology and instruments, appliances and machines of heading 9031)
901190	Parts and accessories for compound optical microscopes, n.e.s.
901210	Microscopes other than optical microscopes; diffraction apparatus
901290	Parts and accessories
901310	Telescopic sights for fitting to arms; periscopes; telescopes designed to form parts of machines, appliances, instruments or apparatus of this Chapter or Section XVI
901320	Lasers, other than laser diodes
901380	Other devices, appliances and instruments
901390	Parts and accessories
901590	Parts and accessories
901600	Balances of a sensitivity of 5 cg or better, with or without weights.
901710	Drafting tables and machines, whether or not automatic
901720	Other drawing, markingout or mathematical calculating instruments
901730	Micrometers, callipers and gauges
901780	Other instruments
901790	Parts and accessories

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
901811	Electrocardiograph
901812	Ultrasound machines
901813	Magnetic resonance imaging apparatus
901814	Scintigraphic apparatus
901819	Pulse oximeters; Multiparametric Patient Monitoring devices
901820	ultra-violet or infra-red ray apparatus used in medical, surgical, dental or veterinary sciences
901831	Syringes, with or without needles
901832	Tubular metal needles and needles for sutures
901839	catheters, Needles, prongs
901841	Dental drill engines, whether or not combined on a single base with other dental equipment
901849	instruments and appliances used in dental sciences, n.e.s.
901850	Other ophthalmic instruments and appliances
901890	Stethoscopes; intubation kits and forceps; suction pump;
901910	Mechano-therapy appliances; massage apparatus; psychological aptitude-testing apparatus
901920	Ozone therapy, oxygen therapy, aerosol therapy, artificial respiration or other therapeutic respiration apparatus
902000	Other breathing appliances and gas masks, excluding protective masks having neither mechanical parts nor replaceable filters.

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
902110	Orthopaedic or fracture appliances
902111	(-2001) - - Artificial joints
902119	(-2001) - - Other
902121	Artificial teeth
902121	artificial teeth
902129	dental fittings (excl. artificial teeth)
902130	(-2001) - Other artificial parts of the body
902131	Artificial joints for orthopaedic purposes
902139	artificial parts of the body (excl. artificial teeth and dental fittings and artificial joints)
902140	Hearing aids, excluding parts and accessories
902150	Pacemakers for stimulating heart muscles, excluding parts and accessories
902190	articles and appliances, which are worn or carried, or implanted in the body, to compensate for a defect or disability (excl. artificial parts of the body, complete hearing aids and complete pacemakers for stimulating heart muscles)
902211	(-1995) For medical, surgical, dental or veterinary uses
902212	Computed tomography (CT) scanners
902213	apparatus based on the use of x-rays for dental uses

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
902214	apparatus based on the use of x-rays, for medical, surgical or veterinary uses (excl. for dental purposes and computer tomography apparatus)
902219	For other uses
902221	apparatus based on the use of alpha, beta or gamma radiations, for medical, surgical, dental or veterinary uses
902229	For other uses
902230	X-ray tubes
902290	x-ray generators other than x-ray tubes, high tension generators, control panels and desks, screens, examination or treatment tables, chairs and the like, and general parts and accessories for apparatus of heading 9022, n.e.s.
902300	Instruments, apparatus and models, designed for demonstrational purposes (for example, in education or exhibitions), unsuitable for other uses.
902410	Machines and appliances for testing metals
902480	Other machines and appliances
902490	Parts and accessories
902511	Clinical or veterinary thermometers, liquid-filled, for direct reading
902519	Infrared thermometers
902520	(-1995) Barometers, not combined with other instruments
902580	Other instruments

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
902590	Parts and accessories
902610	For measuring or checking the flow or level of liquids
902620	For measuring or checking pressure
902680	Flowmeter, Thorpe tube for oxygen 0-15L/min
902690	- Parts and accessories
902710	- Gas or smoke analysis apparatus
902720	- Chromatographs and electrophoresis instruments
902730	- Spectrometers, spectrophotometers and spectrographs using optical radiations (UV, visible, IR)
902740	(-2006) - Exposure meters
902750	- Other instruments and apparatus using optical radiations (UV, visible, IR)
902780	COVID-19 Diagnostic Test instruments and apparatus
902790	-Microtomes; parts and accessories
902820	Electronic drop counter, IV fluids
903020	oscilloscopes and oscillographs
903110	- Machines for balancing mechanical parts
903120	- Test benches

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
903130	(-2006) - Profile projectors
903140	(-1995) Other optical instruments and appliances
903141	(1996-) -- For inspecting semiconductor wafers or devices or for inspecting photomasks or reticles used in manufacturing semiconductor devices
903149	(1996-) – Other
903180	- Other instruments, appliances and machines
903190	- Parts and accessories
903210	- Thermostats
903220	- Manostats
903281	-- Hydraulic or pneumatic
903289	-- Other
903290	- Parts and accessories
910811	With mechanical display only or with a device to which a mechanical display can be incorporated
910812	With optoelectronic display only
910819	Other
940210	Dentists', barbers' or similar chairs having rotating as well as both reclining and elevating movement, and parts thereof

HS-CODE (6 DIGIT)	PRODUCT DESCRIPTION
940290	Medical or surgical furniture

Source: Compiled from (1) World Integrated Trade Solution (WITS), Available at *https://wits.worldbank.org/referencedata.html*; (2) Helble, Matthias (2012)): More trade for better health? International trade and tariffs on health products, WTO Staff Working Paper, No. ERSD-2012-17, World Trade Organization (WTO), Geneva, Available at http://dx.doi.org/10.30875/4bfd1f50-en; (3) Trade in healthcare products, Available at https://trade.ec.europa.eu/doclib/docs/2020/june/tradoc_158776.pdf (last accessed on 29 October 2021)

- SITC Code

The SITC Revisison-2 codes for products listed by the WTO (2012) have been mapped with their corresponding HS codes, which have been cross-checked with the UNComtrade database.[126] For a few products, the HS code was not available due to differences in the SITC and HS code. The products have been divided into three sub-categories:

1. Code A (Dosified/bulk medicines & Inputs specific to the pharmaceutical industry): A list of 9 product codes (SITC) with descriptions, where 6 products have been appropriately mapped with their corresponding HS code.
2. Code B (Chemical Inputs of General Purpose): A list of 33 product codes (SITC) with descriptions, where 24 products have been appropriately mapped with their corresponding HS code.

[126] Checked and compiled from https://comtrade.un.org/data and https://unstats.un.org/unsd/trade/classifications/correspondence-tables.asp (last accessed on 8 December 2021)

3. Code C (Hospital and laboratory inputs & Medical technology equipment): A list of 17 product codes (SITC) with descriptions, where 11 products have been appropriately mapped with their corresponding HS code.

Table A2: SITC Rev2 Codes for Health Products listed by WTO (2012) framework

SITC Code	Corresponding HS Code (4/6-digit)	Product Description
Code A (Dosified/bulk medicines & Inputs specific to the pharmaceutical Industry)		
5411	2936	Provitamins & vitamins
5413	NA	antibiotics, not put up as Medicaments
5414	NA	Vegetable alkaloids and derivatives, not put up as medicaments
5415	NA	hormones, natural, or reproduce by synthesis, in bulk
54164	300211	Antisera and microbial vaccines
54171	300310	Medicaments contain antibiotics/derivatives thereof
54172	300331	Medicaments contain hormones
54173	300341	Medicines containing alkaloids
54179	300211	Medicaments containing other substances
Code B (Chemical Inputs of General Purpose)		
5114	NA	hydrocarbons derivatives, non-halogenated
5122	NA	cyclic alcohols, and their derivatives

SITC Code	Corresponding HS Code (4/6-digit)	Product Description
5139	NA	Oxygen-function acids, and their derivatives
5145	NA	Amine-function compounds
5146	NA	Oxygen-function amino-compounds
5147	NA	- Amide-function compounds; excluding urea
5154	NA	Organo-sulphur compounds
5155	NA	other Organo-inorganic compounds
5311	NA	Synthetic Organic dyestuffs, etc., natural indigo and colour lakes
51129	290219	other cyclic hydrocarbons
51139	290381	other halogenated derivatives of hydrocarbons
51219	290519	other acyclic alcohols, and their derivatives
51236	290713	other phenols and phenol-alcohols
51372	291531	Acid, Saturated acyclic, Esters of acetic acid
51379	291611	other monocarboxylic acids, and their derivatives
51389	291711	other polyacarboxylic acids, and their derivatives
51481	292310	-- Quaternary ammonium salts and hydroxides; lecithin, etc.
51482	292511	Carboxyimide and imide-function compounds

SITC Code	Corresponding HS Code (4/6-digit)	Product Description
51484	292620	other nitrile-function compounds
51485	292700	-- Diazo-,azo-,and azoxy-compounds
51486	292800	Organic derivatives of hydrazine or of hydroxylamine
51489	292910	compounds with other nitrogen functions
51569	293211	-- Other heterocyclic compounds; nucleic acids
51611	285210	Inorganic / Organic Compounds of Mercury, excluding amalgams, chemically defined.
51621	291211	Oxygen-function aldehyde
51629	291431	other ketones etc., and their derivatives
51639	292011	other inorganic Esters, their salts and derivatives
51692	294000	Sugars, chemically pure etc., nes
51699	294200	other Organic compounds
52329	282731	Chlorides; of magnesium, salts and peroxysalts of inorganic acids, nes
53222	320300	Dyeing extracts of vegetable or animal origin
54161	293810	Glycosides and derivatives
54162	300190	Organo-therapeutic glands etc. and extracts
Code C (Hospital and laboratory inputs & Medical technology equipment)		

SITC Code	Corresponding HS Code (4/6-digit)	Product Description
5419	NA	Pharmaceutical goods other than Medicaments
6281	NA	Hygienic and Pharmaceutical articles of rubber
7416	NA	Machinery, plant, Laboratory equipment for heating and cooling, nes
7741	NA	Electro-Medical equipment
7742	NA	X-ray apparatus and equipment; accessories; and parts, n.e.s
51691	350710	Enzymes
59899	382410	Binders, prepared; for foundry moulds or cores; other chemical products and preparations, n.e.s
66581	701010	Laboratory, Hygienic and Pharmaceutical glassware
78531	871310	Invalid carriages, motorized or not
84822	401511	articles of unhardened vulcanized rubber, including gloves
87201	901841	Dental instruments and appliances
87202	382530	Medical, surgical and veterinary instruments and appliances/ Residual products of chemical or allied industries.
87203	901910	Mechano-therapy appliances, massage apparatus, etc.
88111	900659	Photographic cameras
89961	902140	Hearing aids

SITC Code	Corresponding HS Code (4/6-digit)	Product Description
89962	902110	Orthopaedic appliances to compensate for a defect or disability
82121	NA	Medical, dental, surgical or veterinary furniture

Source: https://unstats.un.org/unsd/trade/classifications/correspondence-tables.asp (last accessed on 3 November 2021)

Note: NA means Not Available.

Table A3: Different Version of United Nations Central Product Classification for Health Services

CPC Provisional		CPC Ver 1.1		CPC Ver 2.1	
931	Human health services	931	Human health services	931	Human health services
9311	Hospital services	9311	Hospital services	9311	Inpatient services
				93111	Surgical services for inpatients
				93112	Gynaecological and obstetrical services for inpatients
				93113	Psychiatric services for inpatients
				93119	Other services for inpatients
9312	Medical and dental services	9312	Medical and dental services	9312	Medical and dental services
93121	General medical services	93121	General medical services	93121	General medical services
93122	Specialized medical services	93122	Specialized medical services	93122	Specialized medical services

CPC Provisional		CPC Ver 1.1		CPC Ver 2.1	
93123	Dental services	93123	Dental services	93123	Dental services
9319	Other human health services	9319	Other human health services	9319	Other human health services
93191	Deliveries and related services, nursing services, physiotherapeutic and paramedical services	93191	Deliveries and related services, nursing services, physiotherapeutic and paramedical services	93191	Childbirth and related services
				93192	Nursing services
				93193	Physiotherapeutic services
93192	Ambulance services	93192	Ambulance services	93194	Ambulance services
93193	Residential health facilities services other than hospital services	93193	Residential health facilities services other than hospital services	93195	Medical laboratory services
				93196	Diagnostic-imaging services
				93197	Blood, sperm and organ bank services
93199	Other human health services n.e.c.*	93199	Other human health services n.e.c.*	93199	Other human health services n.e.c.
				932	Residential care services for the elderly and disabled
				93210	Residential health-care services other than by hospitals
		85124	Supply of medical personnel services	9322	Residential care services for the elderly and persons with disabilities
			supply services of doctors	93221	Residential care services for the elderly

CPC Provisional		CPC Ver 1.1		CPC Ver 2.1	
87206	Supply services of nursing personnel		supply services of nurses	93222	Residential care services for young disabled persons
			supply services of other health-care aid	93223	Residential care services for disabled adults
932	Veterinary services	932	Veterinary services	835	Veterinary services
93201 -	Veterinary services for pet animals	93210	Veterinary services for pet animals	83510	Veterinary services for pet animals
		93220	Veterinary services for livestock	83520	Veterinary services for livestock
93209	Other veterinary services	93290	Other veterinary services	83590	Other veterinary services

Source: Compiled from UNCPC, https://unstats.un.org/unsd/classifications/Econ/CPC.cshtml

Note: * This includes services provided by medical laboratories; services provided by blood, sperm and transplant organ banks; diagnostic imaging services without analysis or interpretation, e.g., x-ray, ultrasound; magnetic resonance imaging (MRI), etc.; and. other human health services n.e.c

Appendix B

Table B1: Product-wise Exports of Health Goods across Asia-Pacific from 2018 to 2020

Trade Values in $ Billion

HS Code	Product Description	2018	2019	2020
90*	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories	211.80	205.58	208.87
6307	Other made-up articles, including dress patterns.	8.98	9.44	61.61
9403	Other furniture and parts thereof.	39.52	40.87	45.98
3926	Other articles of plastics and articles of other materials of headings 39.01 to 39.14.	30.25	32.19	39.62
3004	Medicaments (excluding goods of heading 30.02, 30.05 or 30.06) consisting of mixed or unmixed products for therapeutic or prophylactic uses, put up in measured doses (including those in the form of transdermal administration systems) or in forms or packings for retail sale	32.10	34.32	38.04
9401	Seats (other than those of heading 94.02), whether or not convertible into beds, and parts thereof.	33.27	34.73	37.75
3923	Articles for the conveyance or packing of goods, of plastics; stoppers, lids, caps and other closures, of plastics.	18.58	19.17	20.85
8421	Centrifuges, including centrifugal dryers; filtering or purifying machinery and apparatus, for liquids or gases.	15.16	17.64	20.19
3002	Human blood; animal blood prepared for therapeutic, prophylactic or diagnostic uses; antisera, other blood fractions and immunological products, whether or not modified	9.36	10.88	18.08

HS Code	Product Description	2018	2019	2020
	or obtained by means of biotechnological processes; vaccines, toxins, cultures of micro-organisms (excluding yeasts) and similar products			
8413	Pumps for liquids, whether or not fitted with a measuring device; liquid elevators.	17.64	17.78	17.69
2933	Heterocyclic compounds with nitrogen heteroatom(s) only.	15.27	15.47	17.27
6210	Garments, made up of fabrics of heading 56.02, 56.03, 59.03, 59.06 or 59.07.	5.41	5.45	16.89
2902	Cyclic hydrocarbons.	30.17	23.97	15.62
3808	Insecticides, rodenticides, fungicides, herbicides, anti-sprouting products and plant growth regulators, disinfectants and similar products, put up in forms or packings for retail sale or as preparations or articles (for example, sulphur treated bands, wicks and candles, and fly-papers	11.26	11.27	14.93
4015	Articles of apparel and clothing accessories (including gloves, mittens and mitts), for all purposes, of vulcanised rubber other than hard rubber.	6.82	6.88	14.74
8714	Parts and accessories of vehicles of headings 87.11 to 87.13.	11.38	12.29	13.31
8419	Machinery, plant or laboratory equipment, whether or not electrically heated (excluding furnaces, ovens and other equipment of heading 85.14), for the treatment of materials by a process involving a change of temperature such as heating, cooking, roasting	11.43	13.49	13.18
3822	Diagnostic or laboratory reagents on a backing, prepared diagnostic or laboratory reagents whether or not on a backing, other than those of heading 30.02 or 30.06; certified reference materials.	3.34	3.37	7.68
2922	Oxygen-function amino-compounds.	9.28	8.11	7.56

HS Code	Product Description	2018	2019	2020
3402	Organic surfaceactive agents (other than soap); surfaceactive preparations, washing preparations (including auxiliary washing preparations) and cleaning preparations, whether or not containing soap, other than those of heading 34.01.	6.55	6.68	7.16
2905	Acyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives.	11.44	7.49	6.85
3204	Synthetic organic colouring matter, whether or not chemically defined; preparations as specified in Note 3 to this Chapter based on synthetic organic colouring matter; synthetic organic products of a kind used as fluorescent brightening agents or as luminophores, whether or not chemically defined	7.60	7.79	6.66
2941	Antibiotics.	5.30	5.27	5.34
3401	Soap; organic surface active products and preparations for use as soap, in the form of bars, cakes, moulded pieces or shapes, whether or not containing soap; organic surface-active products and preparations for washing the skin, in the form of liquid or cream and put up for retail sale, whether or not containing soap; paper, wadding, felt and nonwovens, impregnated, coated or covered with soap or detergent.	3.77	3.95	5.27
2917	Polycarboxylic acids, their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives.	7.51	6.59	4.86
2915	Saturated acyclic monocarboxylic acids and their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives.	6.23	5.15	4.78
2936	Provitamins and vitamins, natural or reproduced by synthesis (including natural concentrates), derivatives thereof used primarily as vitamins, and intermixtures of the foregoing, whether or not in any solvent.	4.77	4.06	4.43
2208	Undenatured ethyl alcohol of an alcoholic strength by volume of less than 80 % vol.; spirits, liqueurs and other spirituous beverages.	5.34	5.64	4.37

HS Code	Product Description	2018	2019	2020
2918	Carboxylic acids with additional oxygen function and their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives.	4.08	3.74	3.84
2903	Halogenated derivatives of hydrocarbons.	4.43	4.43	3.77
6116	Gloves, mittens and mitts, knitted or crocheted.	3.73	4.15	3.75
2916	Unsaturated acyclic monocarboxylic acids, cyclic monocarboxylic acids, their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives.	4.46	4.20	3.67
2930	Organo-sulphur compounds.	3.20	3.40	3.62
2932	Heterocyclic compounds with oxygen heteroatom(s) only.	4.02	3.61	3.52
4818	Toilet paper and similar paper, cellulose wadding or webs of cellulose fibres, of a kind used for household or sanitary purposes, in rolls of a width not exceeding 36 cm, or cut to size or shape; handkerchiefs, cleansing tissues, towels, tablecloths, serv	3.04	3.57	3.27
2804	Hydrogen, rare gases and other nonmetals.	4.48	3.60	3.24
2931	Other organo inorganic compounds.	3.81	3.34	3.16
2921	Amine function compounds.	3.56	3.33	3.12
2924	Carboxyamide function compounds; amide function compounds of carbonic acid.	2.87	2.79	2.99
3005	Wadding, gauze, bandages and similar articles (for example, dressings, adhesive plasters, poultices), impregnated or coated with pharmaceutical substances or put up in forms or packings for retail sale for medical, surgical, dental or veterinary purposes.	2.12	2.37	2.77
2914	Ketones and quinones, whether or not with other oxygen function, and their halogenated, sulphonated, nitrated or nitrosated derivatives.	2.79	2.52	2.72

HS Code	Product Description	2018	2019	2020
6505	Hats and other headgear, knitted or crocheted, or made up from lace, felt or other textile fabric, in the piece (but not in strips), whether or not lined or trimmed; hairnets of any material, whether or not lined or trimmed.	3.43	3.42	2.72
2907	Phenols; phenolalcohols.	3.39	2.73	2.54
2909	Ethers, etheralcohols, etherphenols, etheralcoholphenols, alcohol peroxides, ether peroxides, ketone peroxides (whether or not chemically defined), and their halogenated, sulphonated, nitrated or nitrosated derivatives.	3.16	3.05	2.45
7324	Sanitary ware and parts thereof, of iron or steel.	1.87	2.07	2.45
3001	Glands and other organs for organo-therapeutic uses, dried, whether or not powdered; extracts of glands or other organs or of their secretions for organo-therapeutic uses; heparin and its salts; other human or animal substances prepared for therapeutic or	1.93	2.11	2.35
3006	Pharmaceutical goods specified in Note 4 to this Chapter.	1.90	2.24	2.11
2929	Compounds with other nitrogen function.	3.19	2.10	2.06
3003	Medicaments (excluding goods of heading 30.02, 30.05 or 30.06) consisting of two or more constituents which have been mixed together for therapeutic or prophylactic uses, not put up in measured doses or in forms or packings for retail sale.	1.92	1.76	1.95
8705	Special purpose motor vehicles, other than those principally designed for the transport of persons or goods (for example, breakdown lorries, crane lorries, fire fighting vehicles, concrete mixer lorries, road sweeper lorries, spraying lorries, mobile wor	2.42	2.31	1.81
2926	Nitrile function compounds.	1.94	2.09	1.79
3701	Photographic plates and film in the flat, sensitised, unexposed, of any material other than paper, paperboard or textiles; instant print film in the flat, sensitised, unexposed, whether or not in packs.	1.87	1.95	1.74

HS Code	Product Description	2018	2019	2020
3301	Essential oils (terpeneless or not), including concretes and absolutes; resinoids; extracted oleoresins; concentrates of essential oils in fats, in fixed oils, in waxes or the like, obtained by enfleurage or maceration; terpenic by-products of the deterpe	1.82	2.03	1.65
4803	Toilet or facial tissue stock, towel or napkin stock and similar paper of a kind used for household or sanitary purposes, cellulose wadding and webs of cellulose fibres, whether or not creped, crinkled, embossed, perforated, surface-coloured, surface- dec	1.51	1.67	1.65
7311	Containers for compressed or liquefied gas, of iron or steel.	1.48	1.54	1.64
9402	Medical, surgical, dental or veterinary furniture (for example, operating tables, examination tables, hospital beds with mechanical fittings, dentists' chairs); barbers' chairs and similar chairs, having rotating as well as both reclining and elevating mo	1.04	1.17	1.40
2942	Other organic compounds.	1.31	1.41	1.36
2906	Cyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives.	1.38	1.38	1.25
2207	Undenatured ethyl alcohol of an alcoholic strength by volume of 80 % vol. or higher; ethyl alcohol and other spirits, denatured, of any strength.	0.88	0.61	0.99
2938	Glycosides, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives.	0.83	0.93	0.96
2842	Other salts of inorganic acids or peroxoacids (including aluminosilicates whether or not chemically defined), other than azides.	0.75	0.90	0.88
2912	Aldehydes, whether or not with other oxygen function; cyclic polymers of aldehydes; paraformaldehyde.	0.80	0.86	0.87
2925	Carboxyimide-function compounds (including saccharin and its salts) and imine-function compounds.	0.66	0.68	0.75

HS Code	Product Description	2018	2019	2020
8713	Carriages for disabled persons, whether or not motorised or otherwise mechanically propelled.	0.79	0.82	0.71
2923	Quaternary ammonium salts and hydroxides; lecithins and other phosphoaminolipids, whether or not chemically defined.	0.73	0.77	0.70
2920	Esters of other inorganic acids of nonmetals (excluding esters of hydrogen halides) and their salts; their halogenated, sulphonated, nitrated or nitrosated derivatives.	0.76	0.74	0.70
4014	Hygienic or pharmaceutical articles (including teats), of vulcanised rubber other than hard rubber, with or without fittings of hard rubber.	0.66	0.72	0.68
6216	Gloves, mittens and mitts.	0.74	0.78	0.68
9108	Watch movements, complete and assembled.	1.11	1.09	0.67
3702	Photographic film in rolls, sensitised, unexposed, of any material other than paper, paperboard or textiles; instant print film in rolls, sensitised, unexposed.	0.52	0.51	0.55
3821	Prepared culture media for the development or maintenance of microorganisms (including viruses and the like) or of plant, human or animal cells.	0.14	0.19	0.52
2939	Vegetable alkaloids, natural or reproduced by synthesis, and their salts, ethers, esters and other derivatives.	0.45	0.49	0.48
2928	Organic derivatives of hydrazine or of hydroxylamine.	0.32	0.39	0.43
2927	Diazo, azo or azoxy-compounds.	0.49	0.49	0.43
2904	Sulphonated, nitrated or nitrosated derivatives of hydrocarbons, whether or not halogenated.	0.53	0.46	0.41

HS Code	Product Description	2018	2019	2020
3203	Colouring matter of vegetable or animal origin (including dyeing extracts but excluding animal black), whether or not chemically defined; preparations as specified in Note 3 to this Chapter based on colouring matter of vegetable or animal origin.	0.26	0.25	0.34
2940	Sugars, chemically pure, other than sucrose, lactose, maltose, glucose and fructose; sugar ethers, sugar acetals and sugar esters, and their salts, other than products of heading 29.37, 29.38 or 29.39.	0.26	0.29	0.29
7017	Laboratory, hygienic or pharmaceutical glassware, whether or not graduated or calibrated.	0.29	0.31	0.28
2847	Hydrogen peroxide, whether or not solidified with urea.	0.23	0.22	0.25
7613	Aluminium containers for compressed or liquefied gas.	0.08	0.10	0.11
7011	Glass envelopes (including bulbs and tubes), open, and glass parts thereof, without fittings, for electric lamps, cathode-ray tubes or the like.	0.04	0.04	0.04
	Total Trade Value	674.03	668.25	768.65

Note: *All Product codes under Chapter 99 are covered under product HS code 90.

Source: Extracted and compiled from WITS Database.

Appendix C

Brief Overview of the World Trade Organization Pharmaceutical Agreement

Signed in 1994, the WTO Pharmaceutical Agreement eliminates tariffs and other duties on a large number of pharmaceutical products and items used to produce them. The agreement is applicable to a limited group of participants and only a handful of countries in the Asia-Pacific, like Australia, Japan and Macau (China).

The concessions agreed to in the WTO Pharmaceutical agreement cover the following items:

- Finished pharmaceutical products, designated by their Harmonised System codes:
    - products classified (or classifiable) in HS chapter 30
    - products classified (or classifiable) in HS headings 2936, 2937, 2939, and 2941, except for dihydrostreptomycin and salts, esters and hydrates thereof
- Pharmaceutical active ingredients and chemical compounds used by the pharmaceutical industry, enumerated in four annexes and designated by a combination of:
    - HS codes (HS subheadings)
    - Product description (name, chemical name, chemical formulae)
- Chemical Abstract Service codes (unique, specific “registration numbers” created by the Chemical Abstract Service and used for the identification of chemical substances

- International Non-proprietary Name codes (managed by the World Health Organization to facilitate the identification of pharmaceutical substances or active pharmaceutical ingredients)

As a result of the Agreement and subsequent reviews, participating members committed to eliminate customs duties and all other duties on all finished pharmaceutical products, whether sold in bulk or in dosified packages for retail sale (paracetamol, antibiotics, vaccines, etc.), and on over 7000 pharmaceutical active ingredients and chemical components used in pharmaceutical supply chains.

Refer to https://www.wto.org/english/tratop_e/pharma_ag_e/pharma_agreement_e.htm for more details (last accessed January 10, 2022)

Appendix D

Table D1: Regional Group Engagement of UNESCAP Member Countries

UNESCAP Members	*WTO Member*	*G20 Member*	*APEC Member*	*OCEANIA Member*	*BIMSTEC Member*	*Indo-Pacific*
Afghanistan	✓	×	×	×	×	×
Armenia	✓	×	×	×	×	×
Australia	✓	✓	✓	✓	×	✓
Azerbaijan	×	×	×	×	×	×
Bangladesh	✓	×	×	×	✓	✓
Bhutan	×	×	×	×	✓	✓
Brunei Darussalam	✓	×	✓	×	×	✓
Cambodia	✓	×	×	×	×	✓
China	✓	✓	✓	×	×	×
Fiji	✓	×	×	✓	×	✓
France	✓	✓	×	×	×	×
Georgia	✓	×	×	×	×	×
India	✓	✓	×	×	✓	✓
Indonesia	✓	✓	✓	×	×	✓

UNESCAP Members	WTO Member	G20 Member	APEC Member	OCEANIA Member	BIMSTEC Member	Indo-Pacific
Islamic Republic of Iran	×	×	×	×	×	×
Japan	✓	✓	✓	×	×	✓
Kazakhstan	✓	×	×	×	×	×
Kiribati	×	×	×	✓	×	×
Kyrgyzstan	✓	×	×	×	×	×
Lao People's Democratic Republic	✓	×	×	×	×	✓
Malaysia	✓	×	✓	×	×	✓
Maldives	✓	×	×	×	×	✓
Marshall Islands	×	×	×	✓	×	×
Micronesia (Federated States of)	×	×	×	✓	×	×
Mongolia	✓	×	×	×	×	×
Myanmar	✓	×	×	×	✓	✓
Nauru	×	×	×	✓	×	×
Nepal	✓	×	×	×	✓	✓
Netherlands	✓	×	×	×	×	×
New Zealand	✓	×	✓	✓	×	✓

UNESCAP Members	WTO Member	G20 Member	APEC Member	OCEANIA Member	BIMSTEC Member	Indo-Pacific
Pakistan	✓	×	×	×	×	×
Palau	×	×	×	✓	×	×
Papua New Guinea	✓	×	✓	✓	×	✓
Philippines	✓	×	✓	×	×	✓
Republic of Korea	✓	×	✓	×	×	×
Russian Federation	✓	✓	✓	×	×	×
Samoa	✓	×	×	✓	×	×
Singapore	✓	×	✓	×	×	✓
Solomon Islands	✓	×	×	✓	×	×
Sri Lanka	✓	×	×	×	✓	✓
Tajikistan	✓	×	×	×	×	×
Thailand	✓	×	✓	×	✓	✓
Timor Leste	×	×	×	×	×	✓
Tonga	✓	×	×	✓	×	×
Turkey	✓	✓	×	×	×	×
Turkmenistan	×	×	×	×	×	×
Tuvalu	×		×	✓	×	×

UNESCAP Members	*WTO Member*	*G20 Member*	*APEC Member*	*OCEANIA Member*	*BIMSTEC Member*	*Indo-Pacific*
United Kingdom of North Britain and Northern Islands	✓	✓	×	×	×	×
United States of America	✓	✓	✓	×	×	✓
Uzbekistan	×	×	×	×	×	×
Vanuatu	✓	×	×	✓	×	×
Viet Nam	✓	×	✓	×	×	✓

Source: Compiled by Authors

Table D2: Illustrative Example of Exclusion List by Thailand for China and Korea in RCEP

HS Code	Product Description
30049020	Closed sterile water for inhalation, pharmaceutical grade
30049041	Anaesthetics: containing procaine hydrochloride
30049052	Analgesics, antipyretics and other medicaments containing chlorpheniramine maleate
30049053	Containing diclofenac, of a kind taken orally
30049054	Containing piroxicam (INN) or ibuprofen
30049055	Other, in liniment form
30049071	Anthelmintic: containing piperazine or mebendazole (INN)
30049092	Containing sorbitol or salbutamol, for infusion

HS Code	Product Description
30049094	Containing cimetidine (INN) or ranitidine (INN) other than for injection
30049095	Containing phenobarbital, diazepam or chlorpromazine, other than for injection or infusion
30049096	Nasal-drop medicaments containing naphazoline, xylometazoline or oxymetazoline
30063010	Barium sulphate, of a kind taken orally
30064020	Bone reconstruction cements
30049072	Like other: herbal medicaments
30049079	Other
30049098	Herbal medicaments

Source: Compiled by Authors from Thailand-Schedule of Tariff Commitments, Annex 1- Schedules of Tariff Commitments, Market Access Annexes, RCEP Agreement. Available at https://www.mti.gov.sg/Improving-Trade/Free-Trade-Agreements/RCEP

Appendix E

Market Access and National Treatment Barriers as per World Trade Organization – General Agreement on Trade in Services

The market access provisions of GATS, laid down in Article XVI, cover six types of restrictions that must not be maintained in the absence of limitations. The restrictions relate to:

a. the number of service suppliers

b. the value of service transactions or assets

c. the number of operations or quantity of output

d. the number of natural persons supplying a service

e. the type of legal entity or joint venture

f. the participation of foreign capital

National treatment (Article XVII) implies the absence of all discriminatory measures that may modify the conditions of competition to the detriment of foreign services or service suppliers. Again, limitations may be listed to provide cover for inconsistent measures, such as discriminatory subsidies and tax measures, residency requirements, etc.

Source: General Agreement on Trade in Services. Available at https://www.wto.org/english/docs_e/legal_e/26-gats.pdf (last accessed on 26 January 2022)

Appendix F

Box F1: Draft Checklist for Policymakers

- Ensure that health sector is a priority sector in trade agreements, widen the coverage and depth of commitments. Reduce tariffs and inverted duties.
- Participate in international forums on health-related discussions, regional, plurilateral, bilateral, and multilateral.
- Identify all the relevant stakeholders for the sector - domestic and international. For domestic stakeholders, examine their sensitivities and concerns related to liberalisation.
- Identify domestic shortages of healthcare professionals, manufacturing capacity, raw materials, etc., which can be mitigated through trade.
- Map the domestic regulations and gaps, if any, in healthcare, and implement and fast-track reforms.
- Focus on capacity building and improving quality, international standards and best practices.
- Consult with regulators of goods and services for healthcare, understand their concerns and need for capacity building and scope for regulatory commitments.
- Regulators need to actively participate in international forums and trade discussions.
- Work with multilateral bodies and the private sector to understand best practices in other countries/regions and for trade-related capacity building for this sector
- Promote social innovation, technology and partnership across multiple stakeholders, both within and outside the country.
- Have a clear and transparent (a) government procurement policy, which covers central, provincial and local procurement (b) policy/framework for engagement of the private sector through models like the PPP model, (c) pricing model which allows USO, but at

the same time, ensures that those with the financial means to pay for the best service/product should pay at the market rate.

- Implement WTO Trade Facilitation Agreement; automate and digitalise the cargo clearance process and enhance the use of technology to connect different clearance agencies and for risk management.
- Enforce intellectual property and engage in international discussion on IPR issues for this sector.
- Carefully design the rules of origin so that there is better utilisation of the trade agreement.
- Sign and implement MRAs in a time bound manner.
- Facilitate and promote multi-stakeholder cross-border sharing of technology, R&D and collaboration.
- Have provision in trade agreements to address health emergencies/pandemics.
- Commitments in health sector needs to be synergised with commitments in other areas like technology, insurance, etc.
- Countries with strength in traditional medical practices have to come up with process for recognition, documenting the practice and process, listing of drugs, etc.
- Leverage SDG 17 to achieve SDG 3

Box F2: Checklist for Multilateral Organisations

- Create forums for discussions across multiple stakeholders and sharing of best practices. There should be a mechanism for regular consultations.
- Strengthen their regional presence and work with individual countries and through regional bodies.

- Support developing countries and LDCs in negotiating in areas like government procurement, investment agreement and MRAs in pharmaceutical and medical devices and services, where there is limited literature and knowledge gaps.
- Support capacity building for trade in this sector.
- Help countries upgrade quality and standards by supporting R&D, technology implementation and innovation.