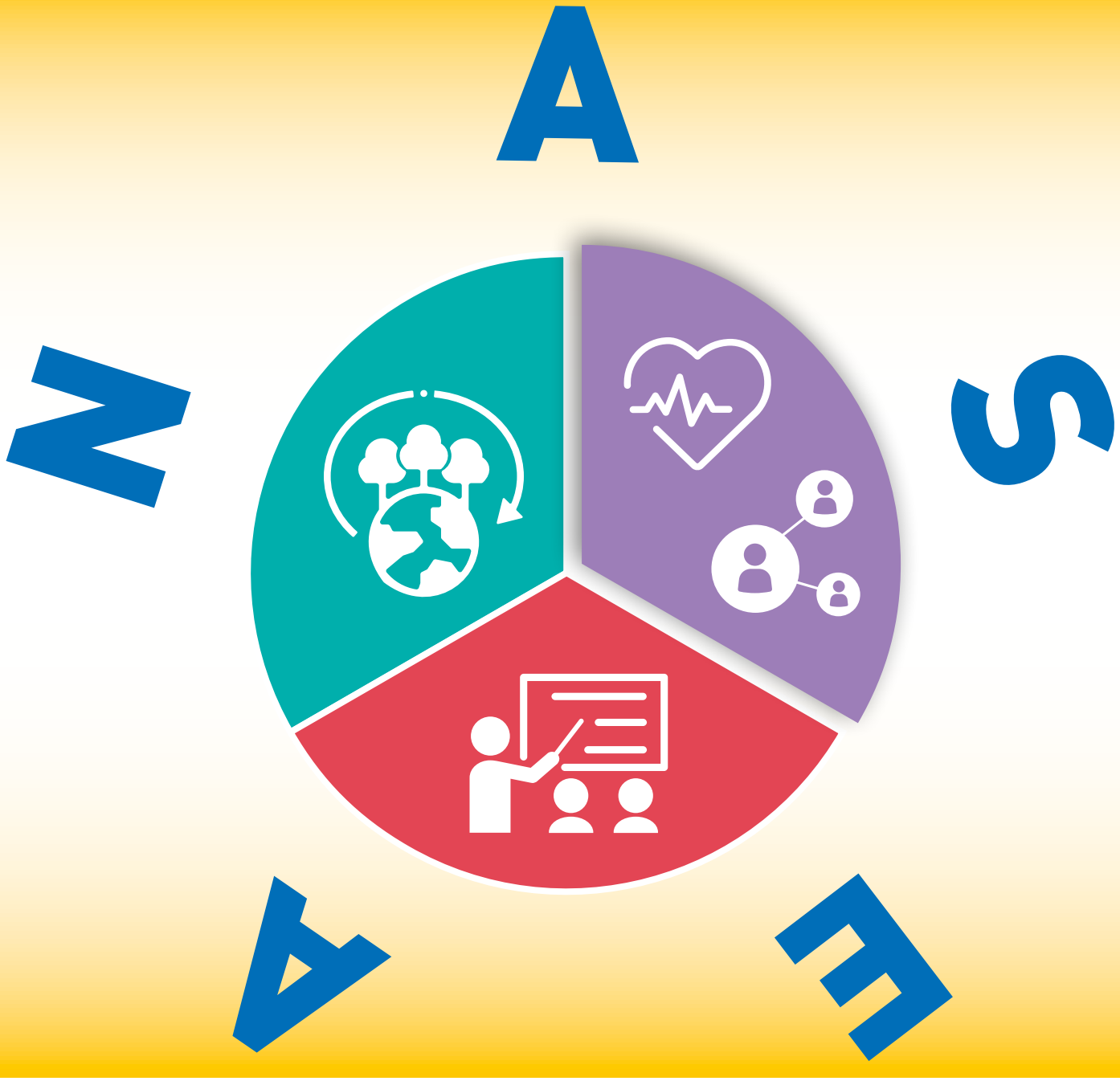
Promoting Services Trade in ASEAN

SECOND PHASE (SOCIAL SERVICES)

Trade in Health Related and Social Services

PAPER 1

FEBRUARY 2020



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Second Phase (Social Services)
Paper 1 / February 2020 / Trade in Health Related and Social Services

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NOTES

The terms country and/or economy as used in this study also refer, as appropriate, to territories or areas; the designations employed and the presentation of the material do not imply the expression of any opinion whatsoever on the part of the ASEAN-Japan Centre concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The following symbols have been used in the tables:

- Two dots (..) indicate that data are not available or are not separately reported.
- A dash (-) indicates that the item is equal to zero or its value is negligible.
- Use of a dash (-) between dates representing years, e.g., 2015–2016, signifies the full period involved, including the beginning and end years.

Reference to "dollars" ($) means United States dollars, unless otherwise indicated.

List of papers under the project on promoting services trade in ASEAN by the ASEAN-Japan Centre

The current paper is the first of a 3-paper series of social services under the second phase of the project on promoting services trade. The other papers under this project are listed below:

First Phase

Paper 1. Trade in Professional Services (February 2017)
Paper 2. Trade in Research & Development Services (February 2017)
Paper 3. Trade in Telecommunication Services (March 2017)
Paper 4. Trade in Computer and Related Services (March 2017)
Paper 5. Trade in Courier Services (January 2018)
Paper 6. Trade in Maritime, Air, Rail and Road Transport Services (February 2018)
Paper 7. Trade in Tourism Services (March 2018)

Second Phase: Social Services

Paper 1. Trade in Health Related and Social Services
Paper 2. Trade in Education Services (forthcoming)
Paper 3. Trade in Environmental Services (forthcoming)

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ABBREVIATIONS

ACIA	ASEAN Comprehensive Investment Agreement
AEC	ASEAN Economic Community
AFAS	ASEAN Framework Agreement on Services
AMS	ASEAN Member States
ASEAN	Association of Southeast Asian Nations
ATISA	ASEAN Trade in Services Agreement
CSAP	Consolidated strategic action plan
CPC	Customs Procedure Code
CPTPP	Comprehensive and Progressive Trans Pacific Partnership
EBOPS	Extended balance of payments services
FDI	Foreign direct investment
GATS	General Agreement on Trade and Services
GDP	Gross domestic product
GNI	Gross national income
HDI	Human Development Index
IO	Input-Output
ISIC	International Standard Industrial Classification
MRA	Mutual Recognition Agreement
MSWRR	Ministry of Social Welfare, Relief and Resettlement
NGO	Non-governmental organization
OECD	Organisation for Economic Co-operation and Development
Lao PDR	Lao People's Democratic Republic
PPP	Public–private partnership
R&D	Research and development
TISMOS	Trade in Services data by mode of supply
UHC	Universal health coverage
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization
WTO	World Trade Organization

CONTENTS

I. INTRODUCTION

Different levels of economic development have led, to some extent, to different levels of human development across the Association of Southeast Asian Nations (ASEAN) Member States. As one of the objectives of the ASEAN Economic Community (AEC) Blueprint 2025 is to build "a highly integrated and cohesive economy", it can be inferred that there is room for a regional growth strategy for strengthening cooperation to help the lagging countries to catch up with the leading ones. In other words, there is a need to focus on strategies at the national and regional levels to facilitate the convergence of human development across the region.

Human development depends on and determines economic and social development. The productivity of the labour force, which depends on its health status, plays a crucial role in determining overall productivity. The key ingredients to human development are the provision of easy access to quality health for all residents in a country. Therefore, policy measures aimed at the smooth functioning of health and social services are of paramount importance for improving and sustaining human development and, thereby, the performance of the economy.

The importance of sustaining the availability and provision of easy access to quality healthcare infrastructure for the residents of ASEAN should be emphasized. However, it may not be possible to implement such strategies satisfactorily in all ASEAN Member States given the shortage of both human and physical capital faced by most of the countries. Furthermore, given the characteristics of health and social services, policymakers might find it difficult to strike a balance between promoting equitable and affordable access to a set of basic health and social services, and modernizing the health and social services sector with recent technologies. Trade liberalization in health and social services may help to ease such constraints.

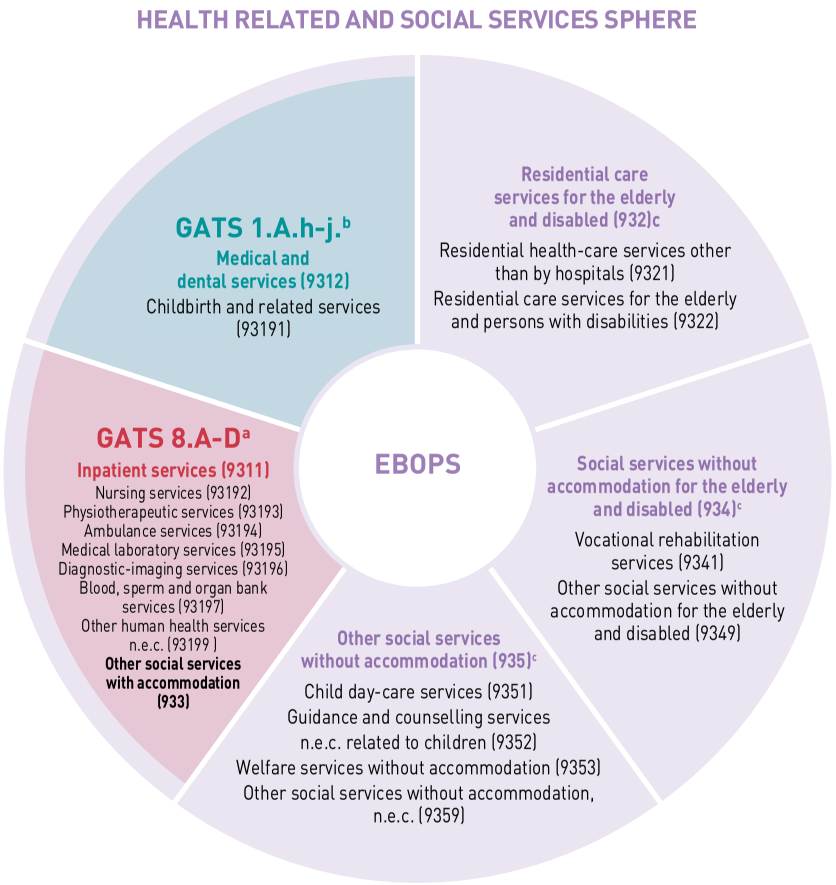
While country-specific national policy measures can address many of the technical, financing, and knowledge-capacity constraints through liberalization, policymakers around the world are increasingly acknowledging that regional cooperation is crucial to complement and augment national action plans towards achieving regional objectives, such as the AEC Blueprint 2025. Hence, it is necessary to implement more liberalization measures in healthcare systems at the national level and, thereby, at the regional level to eliminate the rigidities that restrict those systems from unleashing their potential contribution towards improving human development.

The General Agreement on Trade and Services (GATS), administered by the World Trade Organization (WTO), lists the following four categories under "health related and social services" (WTO, 1991):

8A Hospital services
8B Other human health services
8C Social services
8D Other

Nevertheless, services that are not listed under 8.A-D but related to health and social services, such as medical and dental services (under professional services), residential care services for the elderly and disabled (not listed under GATS but the Extended Balance of Payments Services (EBOPS)), among others, are also included in this study. Figure 1 gives a comprehensive overview of the health related and social services covered in this study.

Figure 1. **Overview of health related and social services covered in this study**



Non-health related and social services area[d]

Other personal services include other components as follows:
- Services of membership organizations (95)
- Washing, cleaning and dyeing services (971)
- Beauty and physical well-being services (972)
- Funeral, cremation and undertaking services (973)
- Other miscellaneous services (979)
- Domestic services (98)

Source: AJC
Notes: GATS: General Agreement on Trade and Services; EBOPS: Extended Balance of Payments Services; and n.e.c.: not elsewhere classified. The numbers in parentheses represent the corresponding Customs Procedure Codes (CPCs).
[a] Health related and social services under the GATS
[b] Professional services under the GATS
[c] Other health related and social services that are not listed under the GATS but the EBOPS
[d] Non-health related and social services that may be contained in the data for the analysis.

II. OVERVIEW OF THE HEALTH RELATED AND SOCIAL SERVICES SECTOR

With a combined gross domestic product (GDP) of $3 trillion, ASEAN is the third-largest economy in Asia and the seventh-largest economic power in the world (table 1). In 2018, ASEAN's population reached 650 million people (table 1), making ASEAN the world's third-largest market. In addition to its economic progress, ASEAN has shown positive trends for social and human development, such as poverty reduction, a rise in the middle-class population, sharp reductions in the infant mortality rate, longer life expectancy, an increasing schooling completion rate, and improvements in youth and adult literacy rates. Moreover, the governments have made strong commitments to universal healthcare while improving the healthcare investment environment. These factors have driven greater demand for quality health-related and social services in the region. Despite these favourable factors, health related and social services in most of the ASEAN Member States (AMS) are still underdeveloped and inadequate. Therefore, the industry is facing challenges to meet current and future demand, from both within and outside the region. Table 1 summarizes the key indicators of health related and social services in ASEAN.

Under national schemes, all AMS aim to have full universal healthcare coverage by 2030. Nonetheless, half of the Member States have achieved less than 70% coverage and need greater efforts to accomplish the goal (table 1). In terms of regional cooperation, ASEAN promotes both trade and investment in health related and social services under the AEC Blueprint 2025. In 2019, the ASEAN Trade in Services Agreement (ATISA) was concluded to further promote and facilitate intraregional trade in services, including health related and social services.[1] A Consolidated Strategic Action Plan (CSAP) was formulated to promote regional investment. The plan identifies the key strategies and corresponding measures, such as the harmonization and standardization of healthcare products and services, the promotion of investment opportunities, public–private partnerships (PPPs), medical tourism, and start-ups in healthcare technology (ASEAN Secretariat and United Nations Conference on Trade and Development (UNCTAD), 2019) (table 2).

[1] For more discussion, see Section IV.

Table 1. **Key indicators of health related and social services in ASEAN**

Country	Population (millions)	Ageing population (% of population aged 65 and above against total population)	Current health expenditure per capita (USD)	Universal Health Coverage (UHC) index	Physicians (per 10,000 people)	Nurses and midwives (per 10,000 people)	Hospital beds (per 10,000 people)
Year	2018	2018	2017[a]	2015	2018[a]	2018[a]	2015[a]
Brunei Darussalam	0.43	4.9	631	>=80	18	66	27
Cambodia	16.2	5.9	76	55	2	10	8
Indonesia	267.7	9.27	112	49	5.2	21	12
Lao PDR	7	4.1	55	48	5	10	15
Malaysia	32.4	6.5	362	70	18	32	19
Myanmar	53.7	6.7	62	60	9	10	9
Philippines	106.6	5.1	129	58	13	2	10
Singapore	5.6	13.7	2 619	>=80	24	75	24
Thailand	69.4	11.9	222	75	8	30	21
Viet Nam	95.5	7.3	123	73	8	14	26

Source: AJC, based on World Bank, World Development Indicator database and World Health Organization, Global Health Observatory Data Repository.
[a] Latest available year.

Table 2. **ASEAN economic agreements and their implications for health related and social services**

Major economic agreement	Year signed	Objectives and history	Relation to healthcare development and investment
ASEAN Framework Agreement on Services and Subsequent Protocols	1995	• Facilitates free ¬flow of intra-ASEAN trade in services and substantially eliminates restrictions on trade in services. • Since 1995, the ASEAN Framework Agreement on Services (AFAS) has covered 10 packages of commitments for further market liberalization and the elimination of barriers to trade in services. • Under the AFAS, market limitations (e.g. market access and national treatment) to the three modes of supply (cross-border supply, consumption abroad, and commercial presence) are gradually eliminated.	• Healthcare services (e.g. specialized medical services, dental services, specialized nursing services, private hospital services, and other human health services, including pharmacy services and welfare services for the elderly and handicapped) are covered under the AFAS and its subsequent protocols. • As Member States liberalize their commitments under the AFAS (e.g. relaxation of foreign equity ownership restrictions and the elimination of investment barriers), the investment environment of the region and that of the Member States is expected to further improve. Mutual Recognition Agreements (MRAs) also contribute to the improvement of the regulatory environment for healthcare business and investment in the region (see MRAs at the end of the table).
MRA on Nursing Services	2006	The objectives of the MRA include the following • Facilitate the mobility of nursing services professionals within ASEAN • Enhance the exchange of information and expertise on standards and qualifications • Promote the adoption of best practices for professional nursing services • Provide opportunities for the capacity-building and training of nurses	Subject to investment and regulatory requirements, cooperation in this area helps healthcare providers, such as hospitals, medical centres, and clinics, invest in (set up a presence, expand, or form a joint venture) or source nursing services.
ASEAN Comprehensive Investment Agreement (ACIA)	2009	The ACIA is one of the main economic instruments for realizing a free and open investment regime. It aims to create a liberal, transparent, and competitive investment environment in ASEAN. It replaces the predecessor ASEAN Investment Agreement.	• The agreement covers manufacturing activities (including pharmaceutical and medical devices manufacturing). It also involves services incidental to manufacturing. • Work under the ACIA relates to liberalization, promotion, facilitation, and cooperation on investment. Work on the elimination of investment barriers is to be undertaken.
MRAs on Medical and Dental Practitioners	2009	The objectives of the MRAs include the following: • Facilitate the mobility of health services professionals within ASEAN • Enhance the exchange of information and expertise on standards and qualifications • Promote the adoption of best practices for professional health services • Provide opportunities for the capacity-building and training of health practitioners	The improved mobility of medical and dental practitioners in ASEAN could more efficiently facilitate technology transfer, sharing of knowledge and best practices, and exchange of information and training. It would help healthcare providers move medical and dental specialists or personnel within the region to increase the efficiency of services.

Source: AJC, based on ASEAN Secretariat and UNCTAD, ASEAN Investment Report 2019.

Brunei Darussalam: Public healthcare services are either free or heavily subsidized by the Government. Brunei Darussalam achieved more than an 80% universal health coverage index (UHC index) in 2015 (table 1). As of 2017, the total number of health facilities in Brunei Darussalam was 56 facilities, of which seven facilities were hospitals, including five public and two private hospitals (table 3). More than 80% of human resources in the health related and social services sector are from the public sector. The total number of doctors in the same year was 664, while the total number of nurses and midwives was 2,907. The density of doctors was approximately 18 doctors per 10,000 population (table 1), which was above the world average (15 doctors per 10,000 population).

Although the ageing population share is still low at 4.9% (table 1), the trend is on the rise. The 12th ASEAN and Japan High Level Officials Meeting on Caring Societies reported that as of 2014, there was no formal long-term institutional home for the elderly in Brunei Darussalam (Ministry of Health, Labour and Welfare (Japan), 2014). Nevertheless, there have been some government initiatives regarding the care of the elderly, e.g. the establishment of senior citizen activity centres, the approval of an action plan emphasizing the rights and protection of the elderly (Borneo Bulletin, 2018a), and the launch of a national study on elderly persons by Universiti Brunei Darussalam (Borneo Bulletin, 2018b).

According to the Master Plan for the Health System and Infrastructure set out by the Ministry of Health, Brunei Darussalam, the Government of Brunei Darussalam has seven key strategies to implement a comprehensive health system and infrastructure program, namely 1) promoting excellent healthcare services; 2) supporting health management and healthy lifestyles; 3) ensuring a sustainable health system as well as maintaining universal access; 4) enhancing policies, regulations, and operations to improve the quality of healthcare; 5) supporting the programme of proactive and transparent governance; 6) strengthening the mission and capacity as well as upgrading all the government hospitals and healthcare facilities; and 7) strengthening the network of health centres throughout the country

Cambodia: The health system is managed by the Ministry of Health under Sub-Decree 67 ANKr. BK (1997) under four laws: (i) the 1996 Law on the Management of Pharmaceuticals; (ii) the 1997 Law on Abortion; (iii) the 2000 Law on Management of Private Medical, Paramedical, and Medical Aid Services; and (iv) the 2002 Law on the Prevention and Control of HIV/AIDS (Annear et al., 2015). Health related and social services are still underdeveloped and inadequate. The UHC index in 2015 was low and covered only half of the total population (table 1). There were 1,548 hospitals in Cambodia in 2016, of which 99% were public (table 3). In 2014, the total number of doctors per 10,000 population was two. The density of doctors is far below that of the world average; therefore, there is an urgent need to increase the supply of doctors in the country either by increasing the number of domestic doctors or importing health related and social services from abroad.

Similar to Brunei Darussalam, the ageing population trend is still low, at 5.9%, but rising (table 1), and there are no formal long-term care institutions for the elderly. Such services are expected from individuals' extended family networks or local nongovernment organizations (NGOs) (Annear et al., 2015). In 2017, the Government approved the National Ageing Policy 2017-2030 with the long-term perspective to prepare for the domestic ageing society by 2030. As a result, the first training institute for elderly care nurses was opened in 2018. After completing the training programme, the nurses will be sent to work in Japan in the short run but are expected to eventually return home to serve the domestic market.

The most recent reforms in the health services sector in Cambodia, described in the Third Health Strategic Plan 2016-2020, are in line with the Second Health Strategic Plan 2008-2015. This third plan emphasized addressing critical health system issues, including: 1) improving reproductive health; 2) reducing maternal, new-born, and child mortality and malnutrition among women and young children; 3) reducing morbidity and mortality caused by communicable diseases; 4) reducing

morbidity and mortality caused by non-communicable diseases and other public health problems; and 5) making the health system more accountable and responsive to the population's health needs.

Indonesia: In total, there were 2,898 hospitals in Indonesia in 2019, of which 1,586 hospitals were public and 1,330 hospitals were private (table 3). In terms of healthcare personnel, there were about 47,289 active doctors in 2018. Nevertheless, due to the country's large population and its geography with several islands, there were 5.2 physicians per 10,000 population in 2018 (table 1) and, currently, the Social Health Insurance index is measured at 96% of the total population. Hence, similar to Cambodia, there is an urgent need to increase the supply of doctors to ensure quality health-related and social services for Indonesia's citizens.

The ageing population comprised 9.27% of the total population, or approximately 24.5 million people in 2018 (table 1). Indonesia has a series of national policies to ensure the welfare of the elderly and prepare for the future increasing ageing population (Sunusi, 2014). In 2016, the Ministry of Health of the Republic of Indonesia established the Ministry of Health Decree No. 25 Yr 2016 on the National Action Plan for the Elderly 2016-2019. The National Action Plan aims to improve the degree of health of the elderly to achieve a healthy, independent, active, productive, and efficient elderly population for families and communities. As of 2019, 4,835 out of 10,032 health centres provided services to the elderly.

The Government has established three types of policy reform related to healthcare systems. These reforms focus on three main areas: 1) strengthening promotive and preventative systems; 2) strengthening the healthcare system both in primary healthcare and the referral system; and 3) strengthening the national social health insurance. The recent reforms regarding financing are concerned with expanding the healthcare services coverage. In 2014, the National Social Security Agency targeted 121.6 million people, or half of the total population, under the management of national healthcare, so-called Badan Penyelenggara Jaminan Sosial. In 2019, the coverage is expected to reach all residents of Indonesia, approximately 257.5 million people, as members of the healthcare system.

Lao People's Democratic Republic (PDR): The health sector in Lao PDR is governed under three administrative levels, namely the central level (Ministry of Health), the provincial level (provincial health offices), and the district level (district health offices). In addition, health services are also provided at the community level (health centres) to expand the service coverage and help mitigate the burdens imposed on larger health facilities. Recently, the private health sector has emerged to provide better healthcare services (Akkhavong et al., 2014). The UHC index is 48%, which is the lowest among the AMS (table 1).

According to the World Health Organization (WHO) (2018), the number of health facilities in 2017 was 2,281 facilities, equipped with 11,070 beds in total (table 3). Compared with the statistics on public health facilities and beds by facility in 2010, the improvement in health related and social services has been very subtle. The number of public health facilities increased by less than 20%, while the number of beds rose approximately 33%. With regard to the health workforce, it was reported that there were 17,666 medical staff employed under the Ministry of Health. Among them, formally trained medical workers, including village health workers, nurses, midwives, medical assistants, medical doctors, and specialists, accounted for 12,904 persons. However, the ratio of physicians per 10,000 people was 5, which is less than the world average and similar to other AMS, except Brunei Darussalam, Malaysia, and Singapore. The situation would have been worse if the private health sector had not entered the market for health related and social services.

In response to the gradually ageing society in Lao PDR (table 1), the National Committee for the Elderly was established in 2005. The Government adopted the following legislation for elderly health and welfare (Vangkonevilay et al., 2011; Khomphonh, 2017): 1) Law on Health Treatment; 2) Law on Hygiene Education; 3) Law on Social Security; 4) Social Welfare Strategy 2011-2020; 5) Decree on

Social Welfare; 6) Community Bad Health Insurance; 7) Decree (No 156/PM) on the Approval and Declaration of Application of the National Policy towards the Elderly in the Lao PDR; and 8) Decree on Promotion of Establishment on Social Organization.

There are two major reforms related to the healthcare system concerning health regulation and the healthcare system (WHO, 2018). First, reforms in health regulations concerning the service-related requirements are based on the principle of "Five Good, One Satisfaction", which is expected to increase patients' satisfaction and also the development of an essential service package providing guidance about the provision of a minimum set of priority services in public health and clinical centres. Second, reforms in the healthcare system are undertaken with the following objectives: the implementation of a health management information system; transformation toward improved population-based data; utilization of data for planning and reporting in decision-making policy activities; and the development of patient-centred delivery models emphasizing the importance of responding to the specific needs of individuals. By 2025, the Government aims to achieve universal health coverage.

Malaysia: In 2018, there were 364 hospitals in Malaysia, of which 154 hospitals, or 42%, belonged to the public sector (table 3). The public hospitals are equipped with 46,611 beds, whereas there are 15,957 beds in the private hospitals. Although the number of public hospitals is less than that of private hospitals, public hospitals can accommodate three times more inpatients. Apart from hospitals, the high number of health/medical clinics can help mitigate the burden on large hospitals in accommodating patients with minor diseases or symptoms. Regarding health personnel, the total number of doctors and nurses is 61,158 persons and 106,373 persons, respectively, of which approximately 76% and 67%, respectively, belong to the public sector. The density of doctors is approximately 18 doctors per 10,000 population, which is above the world average.

In terms of elderly care, the Government has been placing its efforts in promoting the welfare of the elderly by passing the Private Aged Healthcare Facilities Act and the National Health Policy for Older Persons. Throughout Malaysia, there are 10 public nursing homes and 21 private ones. While the private nursing homes are established under the Private Health Facilities and Services Act 1998, there are a total of 1,853 residential and daycare centres operated under the Care Centres Act 1993.

Healthcare was incorporated in the National Key Economic Areas (2010-2020). The government has established two types of policy reforms related to healthcare systems (Sebastian et al, 2016), namely reforms in the healthcare system and reforms in healthcare financing under the "One Care" concept. Four strategies have been implemented to ensure access to high-quality healthcare. These strategies include the promotion of a healthy lifestyle by establishing a complete healthcare system and recreational infrastructure; promoting health awareness and healthy lifestyle activities; empowering the community to plan or conduct individual wellness programmes by taking responsibility for health; and the improvement of the efficiency and effectiveness of the overall delivery system in healthcare. On the other hand, the One Care concept is a "restructured national health system that is responsive and provides the choice of quality healthcare, ensuring universal coverage for healthcare needs of the population based on solidarity and equity".

Myanmar: Myanmar aims to achieve UHC by 2030, which is outlined in the National Health Policy 1993 and the National Health Plans (2011-2016) with specific action plans (Myint, 2015). The situation of UHC in Myanmar is, on average, better than many of the AMS. The UHC index showed 60% coverage in 2015 (table 1). There were 1,115 hospitals equipped with 56,748 beds and 2,199 health centres in 2016 (table 3). In terms of healthcare personnel, 31,542 doctors and 50,967 nurses are in service. The density of doctors in Myanmar (9 physicians per 10,000 population) is lower than that of the world average (15 physicians per 1,000 population). The liberalization of health related and social services trade would help Myanmar increase its supply of health facilities as well as healthcare personnel and, in turn, achieve the targeted UHC by 2030.

Compared with other AMS, especially those with a similar stage of economic development, the percentage of the population aged 65 and above to the total population is moderately higher. In 2018, 6.7% of the population was considered as the ageing population. To accommodate future demand in this area, elderly care services are jointly managed and supported by the Ministry of Health, Ministry of Social Welfare, Relief and Resettlement (MSWRR), and NGOs, such as the Myanmar Maternal and Child Welfare Association. The Ministry of Social Welfare, Relief and Resettlement has been implementing an elderly care scheme since 1992 while enacting the Older People Law from 2016. By 2013, 161 townships provided specific care for the elderly in station hospitals or rural health centres (Ministry of Health (Myanmar), 2014). Furthermore, the Government provided financial and technical assistance to the "Homes for the Aged" recognized by the MSWRR. Other important elderly care initiatives include homes for the aged, the Republic of Korea-ASEAN Home Care Program, Older People Self-help Groups, and daycare centres (Ministry of Health, Labour and Welfare (Japan), 2013; Aung, 2012). According to Frontier Myanmar (2017), there are currently 85 homes for the aged run by voluntary organizations that can accommodate more than 3,000 people. However, it seems the supply of services in this area has not met the domestic demand.

Under the Myanmar National Health Plan (2017-2021), the Government aims to achieve UHC by 2030 and provide a sufficient supply of essential packages of healthcare to their citizens by 2020. The areas of health sector reforms in Myanmar include: 1) health policy and law, 2) health as well as traditional medicine promotion, 3) health service provision, 4) development of human resources for health, 5) development of research in health areas, 6) development of international collaboration, 7) improvement in the roles of cooperatives, joint ventures, the private sector, and NGOs in health areas, and 8) development of partnerships for health systems (European Chamber of Commerce in Myanmar, 2017).

The Philippines: The Philippines' health sector had 1,224 hospitals, 2,587 city/rural health centres and 20,216 village health stations in 2017 (table 3): 64% of these hospitals, on average, were equipped with 41 beds, while only 10% were equipped with an average capacity of 318 beds (Dayrit et al., 2018). The health facilities are distributed unevenly across regions/islands. In terms of human resources for health, there are 40,775 doctors and 90,308 nurses throughout the country. Among AMS, the Philippines performs well in terms of the density of doctors, only next to Singapore and Brunei Darussalam. The density of doctors is approximately 13 doctors per 10,000 population, which is close to the world average (15 doctors) (table 1). Nevertheless, the UHC index is 58% (table 1). In other words, doctors are concentrated in certain parts of the country, while almost half of the population does not have access to basic health related and social services.

The Philippines still also lags in terms of elderly care and long-term care in general. In 2018, the ageing population accounted for 5.1% of the population, which is still moderate (table 1). The situation of long-term care is, however, serious since there are no public facilities for long-term care to accommodate the current and future demand (Dayrit et al., 2018). As a result, families are expected to take care of their own elderly, disabled, and chronically sick persons.

The analysis of recent health reform strategies (2010–2016) focuses on three goals of Kalusugan Pangkalahatan or UHC and along three areas of reform, namely service delivery, health financing, and governance. The reform in service delivery deals with a wide range of activities, e.g. remodelling Government facilities through the Health Facilities Enhancement Program by upgrading the capacity of public health facilities; and establishing PPPs to support the immediate repair, rehabilitation, and construction of selected priority health facilities. In terms of health financing, the reform is aimed at improving the delivery ratios by expanding the enrolment of the poor in the National Health Insurance Program; promoting quality outpatient and inpatient services; increasing the support value of social health insurance by upgrading the information technology to facilitate faster claims; and using the evidence to guide PhilHealth's benefit development processes for targeted services

to a prioritized population. Some strategies in terms of governance reforms are mobilizing more fiscal and health insurance resources for health service; improving allocative efficiency in the healthcare system; transferring the authority for strategic purchasing and provider payment system improvements towards Philhealth; and improving the quality of management and governance in healthcare facilities. In 2019, the new UHC bill enrolled all citizens in the National Health Insurance Programme and encouraged more reforms in the health system.

Singapore: There are 28 hospitals in Singapore, of which about half belong to the public sector (table 3). Despite the small number of hospitals, there are more than 2,000 clinics and health services centres offering primary care. Regarding health personnel, in 2018, there were about 13,800 registered doctors and 42,100 registered nurses/midwives, of which more than 60% each belonged to the public sector. In 2018, the density of doctors per 10,000 population was 24 doctors, far above the world average (15 doctors).

Like other developed economies, Singapore is facing the issue of an ageing society where 13.7% (2018) of its population is aged over 64 years old (table 1). There are 72 nursing homes and 123 centre-based care facilities. The government has also launched initiatives such as the Pioneer Generation Package, Enhancement for Active Seniors, the Silver Support Scheme, among others, to support the elderly, especially in terms of financial support or subsidies (Government of Singapore, 2016).

Under its Beyond Healthcare 2020 plan, Singapore has launched several initiatives to enhance the delivery of healthcare services in Singapore. These include the reorganization of six regional health systems into three integrated healthcare clusters to better optimize resources and capabilities, and provide more comprehensive and patient-centred care to meet Singaporeans' evolving healthcare needs.[2] The integrated clusters will offer a comprehensive suite of healthcare services, including acute and community hospitals, primary care, and community care.

In addition, Singapore has also implemented reforms in its health insurance scheme. MediShield Life replaced MediShield from 1 November 2015. MediShield Life is a basic health insurance plan that protects all Singaporeans and permanent residents against large hospital bills as well as selected costly outpatient treatments, such as dialysis and chemotherapy for cancer. The plan is basic because it is sized for subsidized treatment in public hospitals. All Singaporeans are covered by the MediShield Life for life, regardless of age or health condition.

Thailand: In 2007, the National Health Act established the National Health Commission Office with specific missions to improve the national health system of Thailand. In total, there were 988 hospitals around Thailand in 2017, of which 641 hospitals were public and 347 hospitals were private (table 3). However, the large number of public and private primary care facilities (13,703 public facilities and 24,809 private facilities) can help deliver health related and social services to meet the domestic demand. In terms of healthcare personnel, there are approximately 36,938 doctors and 165,541 nurses in Thailand. The density of doctors is approximately 8 doctors per 10,000 population, which is below the world average (15 doctors). This suggests that Thailand is facing a scarcity of doctors. Despite the scarcity, the government has been promoting Thailand to become a regional hub of medical services in Asia. The challenge for the government, therefore, is to balance the gains from trade in health related and social services with the health benefits of its citizens. This is to prevent problems of access and equity of the services, especially for poor people. However, Thailand performs well in terms of UHC. In 2015, the UHC index is 75% coverage, behind only Brunei Darussalam and Singapore (table 1).

[2] https://www.moh.gov.sg/news-highlights/details/reorganisation-of-healthcare-system-into-three-integrated-clusters-to-better-meet-future-healthcare-needs

Regarding the ageing population, Thailand had reached the status of an aged society in 2005 (Foundation of Thai Gerontology Research and Development Institute, 2017). Currently, 11.9% of the population is aged above 64 years old, which is the highest among the AMS (table 1). Under its chairmanship of the ASEAN Summit and its related summits in 2019, Thailand took the initiative to establish the ASEAN Centre for Active Ageing and Innovation in Bangkok to serve as a knowledge centre to provide capacity building and to conduct research on active ageing. The ministry primarily in charge of elderly welfare is the Ministry of Social Development and Human Security. As of 2015, there are 12 Social Welfare Development Centers for Older Persons that provide subsidized housing, and education and training for the elderly. Due to the increasing number of elderly, goods and services, such as planned communities for senior citizens, home-based care services, geriatric clinics, among others, have recently been offered in the market. Regardless of all the efforts from both the public and private sectors, the challenges remain. The supply of health related and social services for the elderly is still insufficient, while the existing goods and services are at high prices. Liberalization of services helps increase the competition in the market and, in turn, leads to lower prices and higher volume and a variety of services.

Some recent reforms, such as the National Strategic Plan for Public Health (2017-2036) and e-health strategy (2017-2026) (Thailand Board of Investment, 2018) cover 1) supplying medicine and medical devices; 2) creating a high standard quality of healthcare; and 3) the development of tomorrow's world-class medical hub system. Thailand's hospitals have worked to meet healthcare accreditation standards to ensure that residents and visitors continue to get access to premium medical care. These reforms aim to provide unprecedented business opportunities to healthcare visionaries.

Viet Nam: Healthcare facilities are primarily governed by both the Ministry of Health and provincial departments of health (General Statistics Office (Viet Nam), 2016). In total, there were 1,085 hospitals across Viet Nam in 2017, of which 86 were from the public sector (table 3). Almost 12,000 public and private facilities offer primary care services. Regarding healthcare personnel, 74,400 doctors and 107,600 nurses are in service. The density of doctors in Viet Nam (8 doctors per 10,000 population) is lower than that of the world average (1.5 doctors per 1,000 population) (table 1). The UHC index is as high as 73% coverage. Similar to other AMS, to increase the supply of health facilities as well as healthcare personnel, further liberalization of health related and social services trade would be required.

Viet Nam has a high proportion of its population aged 65 and above. The proportion accounted for 7.3% of the population in 2018, which is only lower than that of Thailand (11.9%) and Singapore (11.5%) (table 1). However, the number of nursing homes and facilities for elderly care or "social protection establishments" is quite low. In 2015, there were 153 social protection establishments, of which 36% were public, 36% were non-profit organizations, and 27% were private enterprises (Ministry of Health (Viet Nam), 2016). The public social establishments can accommodate approximately 2,000 persons (Viet Nam News, 2017), whereas the other forms of establishments can help absorb the demand to a much lesser extent. With the rising number of elderly, Viet Nam is gradually facing the new challenge of a nursing home supply shortage. However, the demand is still growing subtly as the idea of nursing homes is new to Vietnamese people, who tend to grow up in extended families.

A recent reform implemented in healthcare services was specified in Viet Nam's Five-Year Socio-Economic Development Plan (2016-2020). This reform involves reforming the contribution of health insurance and the coverage rate of health insurance (Mary Brown Legal, 2015). The Government aims to increase the coverage to be above 80% of the population. Furthermore, the density of doctors, the total number per 10,000 population, is to be raised to 9–10 doctors, while the number of patient beds of 26.5 per 10,000 people is to be achieved by 2020 (ASEAN Secretariat and UNCTAD, 2019).

Table 3. **Number of health facilities and healthcare personnel in ASEAN Member States**

Country	Health facilities	Public	Private	Total
Brunei Darussalam (2017)[a]	Hospitals	4	2	6
	Medical clinics and health services centres	16	34	50
	Dental services facilities	75	5	80
Cambodia (2016)[b]	Hospitals	1 537	11	1 548
	Medical clinics and health services centres	..	3 683	3 683
	Dental services facilities	..	41	41
Indonesia (2019)[c]	Hospitals	1 586	1 330	2 898
	Medical clinics and health services centres	9 993	8 841	18 834
	Dental services facilities	0	2 104	2 104
Lao PDR (2017)[d]	Hospitals	1 253	1 028	2 281
	Medical clinics and health services centres	..	..	..
	Dental services facilities	..	..	..
Malaysia (2018)[e]	Hospitals	154	210	364
	Medical clinics and health services centres	3 239	8 364	11 603
	Dental services facilities	2 324	2 311	4 635
Myanmar (2016)[f]	Hospitals	..	..	1 115
	Medical clinics and health services centres	..	..	2 199
	Dental services facilities	..	..	..
Philippines (2017)[g]	Hospitals	434	790	1224
	Medical clinics and health services centres	22 803	..	22 803
	Dental services facilities	..	..	..
Singapore (2018)[h]	Hospitals	15	13	28
	Medical clinics and health services centres (Primary care facilities)	20	2 222	2 242
	Dental services facilities	245	876	1 121
Thailand (2017)[i]	Hospitals	641	347	988
	Medical clinics and health services centres	13 703	24 809	38 512
	Dental services facilities	..	..	..
Viet Nam (2017)[j]	Hospitals	936*	149*	1 085*
	Medical clinics and health services centres	11 120	710	11 830
	Dental services facilities	..	..	..

Source: AJC, based on a) Ministry of Health (Brunei Darussalam); b) Ministry of Health (Cambodia); c) Ministry of Health (Indonesia); d) WHO (2018); e) Ministry of Health (Malaysia) and Department of Social Welfare (Malaysia); f) Ministry of Health (Myanmar); g) Dayrit et al. (2018); h) Ministry of Health (Singapore); i) Ministry of Health (Thailand); j) General Statistics Office (Viet Nam).
* indicates AJC's estimation; years indicated in parentheses are the latest available years.

Country	Healthcare personnel	Public	Private	Total
Brunei Darussalam (2017)[a]	Doctors	566	98	664
	Nurses/Midwives	2 488	419	2 907
	Dentists	93	12	105
Cambodia (2016)[b]	Doctors	..	..	264*
	Nurses/Midwives	..	..	14 511*
	Dentists	..	..	..
Indonesia (2019)[c]	Doctors	33 102	14 187	47 289
	Nurses/Midwives	455 270	80 109	535 459
	Dentists	9 942	3 088	13 030
Lao PDR (2017)[d]	Doctors	..	..	3 320*
	Nurses/Midwives	..	..	6 507*
	Dentists	..	..	..
Malaysia (2018)[e]	Doctors	46 509	14 649	61 158
	Nurses/Midwives	71 499	34 874	106 373
	Dentists	6 455	3 244	9 699
Myanmar (2016)[f]	Doctors	13 099	18 443	31 542
	Nurses/Midwives	..	..	50 967
	Dentists	782	2 437	3 219
Philippines (2017)[g]	Doctors	20 214	20 561	40 775
	Nurses/Midwives	54 943	35 365	90 308
	Dentists	..	..	..
Singapore (2018)[h]	Doctors	8 819	4 225	13 044
	Nurses/Midwives	25 636	10 711	36 347
	Dentists	525	1 768	2 293
Thailand (2017)[i]	Doctors	29 809*	7 129*	36 938*
	Nurses/Midwives	142 034*	23 507*	165 541*
	Dentists	7 226*	494*	7 720*
Viet Nam (2017)[j]	Doctors	..	..	74 400
	Nurses/Midwives	..	..	136 900
	Dentists	..	..	..

III. THE ASCENDANCY OF TRADE IN HEALTH RELATED AND SOCIAL SERVICES

In 2017, the total services supply to foreign markets from ASEAN (exports) was $581 billion, while the total receipts of services from abroad (imports) were $637 billion (table 4). For both imports and exports, health related and social services accounted for approximately 0.2%–0.3% of the totals. Health related and social services are provided through four modes of trade in services, namely cross-border trade (Mode 1), consumption abroad (Mode 2), commercial presence (Mode 3), and the movement of natural persons (Mode 4). Table 5 provides typical health related services by mode of supply.

In terms of the health related and social services exports, the largest services provision is through Mode 2, accounting for $1,196 million or 71% (table 4), whereas the supply of services is the smallest in Mode 3, which occupies only $26 million, or 2%. On the other hand, the imports give a contrasting picture. The receipts of health related and social services are the most substantial in Mode 3 at approximately $515 million (43%), while Mode 4 demonstrates a very limited share ($64 million or 5%).

Table 4. **Estimated value and share of health and social services supply in ASEAN, by mode of supply, 2017**
(Millions of dollars and per cent)

	Receipts from the world (imports)				Supply to the world (exports)			
	Health and social services		Total services		Health and social services		Total services	
Mode of Supply	Value	Share	Value	Share	Value	Share	Value	Share
Mode 1	222	18	260 689	41	360	21	232 353	40
Mode 2	399	33	98 711	15	1 196	71	126 920	22
Mode 3	515	43	253 285	40	26	2	199 466	34
Mode 4	64	5	24 685	4	96	6	22 307	4
Total	**1 200**	**100**	**637 370**	**100**	**1 678**	**100**	**581 046**	**100**

Source: AJC, based on data from World Trade Organization (Trade in Services data by mode of supply (TISMOS)) and UNCTADStat.

Table 5. Trade in health related services by mode of supply

Mode	Trade in health services	Trade in ancillary services	Trade in goods associated with health services
Mode 1: Cross-border supply	Tele-medicine, including diagnostics, radiology	• Distance medical education and training • Medical transcription, back office • Medical research tools and databases • Medical insurance	• Healthcare equipment • Drugs • Medical waste • Prosthesis
Mode 2: Consumption abroad	• "Medical tourism", i.e. voluntary trip to receive medical treatment abroad • Medically-assisted residence for retirees • Expatriates seeking care in country of residence • Emergency cases (e.g., accident when abroad)	• All activities associated with health tourism (e.g., transport, hotel, restaurant, paramedical, local purchases, etc.) • Local medical education and training of foreign nationals	
Mode 3: Commercial presence	Foreign participation or ownership of hospital/ clinic or medical facilities (e.g., capital investments, technology tie-ups, collaborative ventures)	• Foreign-sponsored education or training centres • Foreign-sponsored medical research facilities	
Mode 4: Presence of natural persons	Movement of doctors and health personnel for the purpose of commercial medical practice	Movement of doctors and health personnel for other purposes (e.g., education or training)	

Source: Chanda, 2017.

1. Mode 1: Supply through cross-border trade

Trade in Mode 1 of health related and social services seems underused in most of the AMS possibly due to underinvestment in technology and research and development (R&D) and low degree of liberalization of such services in the region. However, there have been efforts from AMS to boost the trade volume during the past decade (see box 1).

(a) Exports

Exports of health related and social services in Mode 1 have been growing over time (table 6). The recent exports value amounts to $360 million, double that of 2011. Singapore and the Philippines have been the largest contributors to ASEAN exports, which, in 2017, accounted for $288 million (80% of total exports) and $46 million (13%), respectively. The amount of exports from Brunei Darussalam, Cambodia, and Lao PDR has been negligible, while other member states' exports have been moderate.

(b) Imports

Although the volume of imported health related and social services is smaller than that of the exports, and some fluctuations can be observed, the AMS have been gradually increasing their imports of such services in the past decade (table 6), except Lao PDR and Myanmar. Similar to exports, Singapore and the Philippines have been the largest importers among AMS. In 2017, their imports comprised 52% ($116 million) and 41% ($92 million), respectively.

Table 6. **Trade in Mode 1 of health related and social services, 2005-2018**
(Millions of dollars)

Country	Annual average 2005-2010	2011	2012	2013	2014	2015	2016	2017	2018
Exports									
Brunei Darussalam	0	0	0	0	0	0	0	0.001	..
Cambodia	0.19	0.21	0.48	0.20	0.47	0.04	0.07	0.1	..
Indonesia	2.7	5.7	7.6	6.8	5.4	4.0	3.2	4.8	..
Lao PDR	0	0	0	0	0	0	0	0	..
Malaysia	9.7	1.9	2.0	2.4	3.4	4.6	4.4	5.6	..
Myanmar	0	0	0.000001	0	3.9	12	11	3.7	..
Philippines	2.8	9.4	11	14	33	36	36	46	..
Singapore	36	*147*	*178*	*157*	*205*	*254*	*262*	*288*	*304*
Thailand	10	11	9.4	8.8	7.0	6.6	6.9	7.8	..
Viet Nam	2.2	1.8	3.3	3.4	7.8	5.9	3.8	4.3	..
ASEAN total	**64**	**177**	**212**	**193**	**266**	**323**	**327**	**360**	**..**

.../

Table 6. **Trade in Mode 1 of health related and social services, 2005-2018** (Millions of dollars) (Concluded)

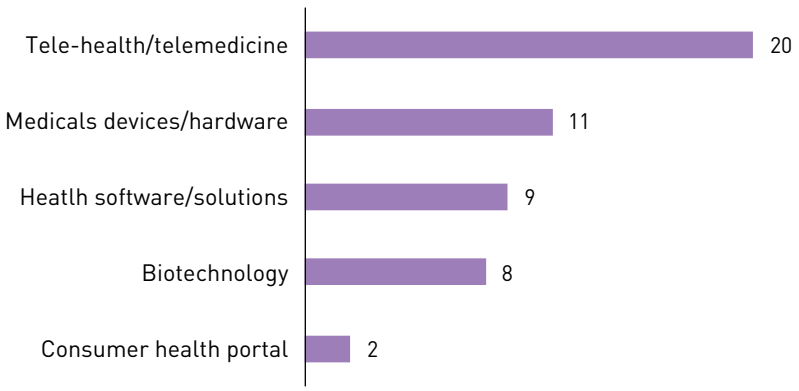
Country	Annual average 2005-2010	2011	2012	2013	2014	2015	2016	2017	2018
Imports									
Brunei Darussalam	0.003	0.035	0.056	0.047	0.064	0.002	0.087	0.196	..
Cambodia	0.9	1.6	1.1	0.7	0.9	0.3	0.4	0.5	..
Indonesia	3.1	5.0	6.6	6.3	5.7	1.6	1.2	1.3	..
Lao PDR	0	0	0	0	0	0	0	0	..
Malaysia	1.8	0.03	1.1	0.01	1.1	2.2	1.4	2.3	..
Myanmar	0	0	0	0	0	0	0	0	..
Philippines	7.7	15	10	16	28	121	57	92	..
Singapore	14	*54*	*66*	*82*	*98*	*129*	*122*	*116*	*122*
Thailand	2.0	1.5	1.7	1.5	1.4	2.1	2.2	2.3	..
Viet Nam	5.5	5.6	4.2	10	14	11	8.1	7.2	..
ASEAN total	**35**	**83**	**91**	**116**	**149**	**267**	**193**	**222**	**..**

Source: AJC, based on data from World Trade Organization (Trade in Services data by Mode of Supply (TISMOS)) and UNCTADStat.
Note: The numbers in italic represent the data from a country's balance of payments complied by UNCTADStat.

Box 1. **Growing tele-health and telemedicine in ASEAN**

In terms of the number of start-ups, tele-health and telemedicine (Mode 1) account for the highest number among the top 50 most-funded medical technology start-ups in ASEAN (figure B1.1). This, therefore, shows the growing trend of Mode 1 in the region. These start-ups accumulated approximately $1 billion in venture capital funding during 2017–2019. However, most of the start-ups and the funds are concentrated in Singapore, 39 out of 50 firms with 88% of all funds.

Box figure B1.1. **Top 50 most-funded medical technology start-ups in ASEAN, by specialization, 2019** (Number of companies)



Source: AJC, based on ASEAN Secretariat and UNCTAD, ASEAN Investment Report 2019

2. Mode 2: Supply through consumption abroad

Mode 2 has a large presence in ASEAN both in terms of exports and imports as health services, such as medical tourism, play a significant role in inducing the growth in such services trade. The great ambition of ASEAN to become an Asian medical hub helps promote inter and intra-regional trade in Mode 2 of health related and social services (see box 2).

(a) Exports

Overall, the AMS have been increasing their exports of health related and social services in Mode 2 (table 7). The export volume in 2017 ($958 million) was more than double that of the past decade ($376 million). This has been largely due to the governments' continuous efforts to promote a regional medical hub. Thailand, Malaysia, and Singapore are the leading exporting countries in this area. Their exports account for $589 million, $295 million, and $133 million, respectively, which occupy more than two-thirds of the total export market. Under the regional medical hub scheme,

Table 7. **Trade in Mode 2 of health related and social services, 2005–2018** (Millions of dollars)

Country	Annual average 2005-2010	2011	2012	2013	2014	2015	2016	2017	2018
Exports									
Brunei Darussalam	0.60	0.58	0.59	0.41	0.21	0.37	0.44	0.67	..
Cambodia	0	0	0	0	0	0	0	0	..
Indonesia	6.1	8.4	8.7	9.4	11	11	12	14	..
Lao PDR	0	0	0	0	0	0	0	0	..
Malaysia	*34*	*167*	*181*	*219*	*228*	*235*	*271*	*295*	..
Myanmar	1.1	4.2	7.2	13	21	31	29	24	..
Philippines	*8.7*	*23*	*23*	*25*	*28*	*36*	*44*	*69*	*196*
Singapore	67	81	134	143	131	110	125	133	..
Thailand	*232*	*289*	*389*	*389*	*397*	*467*	*533*	*589*	..
Viet Nam	27	43	55	57	71	67	66	72	..
ASEAN total	**376**	**617**	**798**	**857**	**887**	**958**	**1 081**	**1 196**	**..**
Imports									
Brunei Darussalam	2.2	3.3	4.8	5.1	3.5	3.9	2.8	3.0	..
Cambodia	0	0	0	0	0	0	0.001	0.001	..
Indonesia	0.6	0.7	0.8	0.9	0.9	0.8	0.9	1.0	..
Lao PDR	0	0	0	0	0	0	0	0	..
Malaysia	*21*	*40*	*27*	*19*	*22*	*19*	*17*	*24*	..
Myanmar	13	23	16	11	13	12	11	17	..
Philippines	*9*	*8*	*21*	*19*	*37*	*38*	*54*	*66*	*71*
Singapore	29	135	113	123	209	214	174	178	..
Thailand	*8.8*	*9.6*	*9.9*	*21*	*17*	*9.7*	*7.1*	*13*	..
Viet Nam	34	64	73	80	68	85	76	97	..
ASEAN total	**117**	**284**	**266**	**279**	**372**	**382**	**342**	**399**	**..**

Source: AJC, based on data from World Trade Organization (Trade in Services data by Mode of Supply (TISMOS)) and UNCTADStat.
Note: The numbers in italic represents the data from a country's balance of payments complied by UNCTADStat.

medical tourism and medically assisted residence for retirees brought about considerable growth for exports under Mode 2.

(b) Imports

Under Mode 2, ASEAN imported health related and social services with a value of $399 million in 2017. The volume of imports was particularly high for Singapore, Viet Nam, and the Philippines. Among the AMS, Singapore is the largest importer, and its imports accounted for $178 million or 45% of ASEAN's total imports under this category. As domestic health related and social services impose high costs on customers in Singapore, it is less expensive to travel to receive medical services in neighbouring countries, such as Malaysia and Thailand, where customers can get a similar quality of service with cheaper prices. In contrast, customers from countries such as the Philippines and Viet Nam have different motivations to import the services under Mode 2. One of the motivations is to gain access to the services that are not available in those countries. These services are services that require higher technology and advanced knowledge. Moreover, the available services are relatively less developed compared to those of Malaysia or Thailand. Therefore, customers, especially from the expanding upper-middle-income class, are seeking services with better quality but affordable prices. The same situation can also be observed for other neighbouring countries, e.g., Cambodia and Lao PDR, where customers travel to receive medical treatment in countries with better service quality. However, these trends are not reflected in the data (low volume of imports) as the customers from those countries are concentrated in the high-income class, which constitutes a small proportion of society.

Box 2. **Medical tourism in ASEAN**

ASEAN is one of the most attractive destinations for medical tourism owing to its affordable and high-quality private healthcare facilities. Malaysia, Singapore, and Thailand have been competing to become a hub of medical tourism in the region. Even though the number of medical tourists to Singapore was stagnant or even declined during 2011–2017, the annual growth rates of medical tourism in Malaysia and Thailand are 9% and 30%, respectively (table B2.1). In 2017, Malaysia attracted approximately 1,050,000 medical tourists, while the number of medical tourists to Thailand doubled that of Malaysia (2,400,000 medical tourists). The downturn of Singapore's medical tourism mainly came from the rising costs of the services coupled with the quality improvement in health and social services in other ASEAN countries. Currently, the Philippines and Viet Nam are also making efforts to promote their medical tourism and attract tourists from their neighbouring countries.

Box table B2.1. **Medical tourists in ASEAN Member States, 2011 and 2017** (Number)

Country	2014	2015
Malaysia	643 000	1 050 000
Philippines	..	80 000 - 250 000
Singapore	540 000	370 000 - 550 000*
Thailand	500 000	2 400 000
Viet Nam	..	80 000

Source: AJC, based on Department of Health (Philippines) and ASEAN Secretariat and UNCTAD, ASEAN Investment Report 2019.
*Based on 2016 estimate.

3. Mode 3: Supply through commercial presence

Different from other modes, the AMS all record deficits in health related and social services trade, with receipts being greater than the volume supplied to the world. In other words, the presence of foreign companies in ASEAN is significantly larger than ASEAN's commercial presence abroad (see box 3 and box 4). Policies supporting domestic investors' capacities to penetrate foreign markets and policies liberalizing domestic markets are required if ASEAN countries aim to raise the volume of both exports and imports of health related and social services in Mode 3.[3]

(a) Exports (ASEAN presence abroad)

Generally, the scale and coverage of health related and social services provided by ASEAN investors in foreign markets are fairly small. Nearly 100% of ASEAN's total exports or services supplied in Mode 3 comes solely from Singapore ($26 million) (table 8). The increase in the export volume has been very small or negligible during the past decade. ASEAN's presence abroad seems not to be the priority investment area for AMS, especially Thailand and Malaysia. Both countries have been placing their efforts in promoting a regional medical hub in their own countries, rather than investing abroad, whereas the rest of the AMS are still struggling to develop their own domestic health related and social services.

(b) Imports (Foreign presence in ASEAN)

Singapore, Viet Nam, and the Philippines host a large number of foreign affiliates that supply health related and social services, and the import volume has been increasing over time (table 8). In Mode 3, Singapore accounts for almost half of ASEAN's total imports, or $229 million, while the import volumes of Viet Nam and the Philippines were $145 million and $119 million in 2017, respectively. Although Singapore's domestic market of health related and social services is very competitive, high technology and R&D networks, domestic demand (especially of expats), and the locational advantage enticing foreign customers have made the market highly attractive to both domestic and foreign investors, such as hospitals and medical laboratories. On the other hand, Viet Nam and the Philippines offer different market potentials. As quality health related and social services are not offered by domestic health facilities, there is a high demand for quality services, provided by foreign companies, from the expanding upper middle-income class and the large population.

In contrast, foreign investors are facing difficulties in investing in countries such as Malaysia and Thailand, where the markets already face high competition among domestic investors. They also find that the markets in the rest of the countries are not attractive due to the small domestic demand. Therefore, the small volume of imports in Mode 3 or the low foreign presence can be observed in most of the AMS. These countries may consider liberalization of the services in this area to enhance competition and expand the domestic markets. Foreign competition and technology from abroad help the domestic markets to achieve a higher quality of services and, in turn, benefit the citizens in the countries.

[3] See ASEAN Investment Report 2019 (ASEAN Secretariat and UNCTAD, 2019).

Table 8. **Trade in Mode 3 of health related and social services, 2005–2017** (Millions of dollars)

Country	Annual average 2005-2010	2011	2012	2013	2014	2015	2016	2017
Exports								
Brunei Darussalam	0	0	0	0	0	0	0	0
Cambodia	0	0	0	0	0	0	0	0
Indonesia	0	0	0.002	0.004	0.004	0.004	0.007	0.01
Lao PDR	0	0	0	0	0	0	0	0
Malaysia	0.0003	0.004	0.007	0.015	0.024	0.021	0.029	0.026
Myanmar	0	0	0	0	0	0	0	0
Philippines	0.001	0.005	0.007	0.011	0.019	0.026	0.038	0.045
Singapore	1.1	5.6	8.1	12	16	18	24	26
Thailand	0.0006	0.0063	0.010	0.015	0.018	0.024	0.033	0.039
Viet Nam	0	0	0	0	0	0	0	0.001
ASEAN total	**1.05**	**5.61**	**8.13**	**12**	**16**	**18**	**24**	**26**
Imports								
Brunei Darussalam	0.1	1.4	1.2	0.8	1.9	2.0	1.5	2.1
Cambodia	0.1	0.3	0.2	0.2	0.5	0.6	0.7	1.0
Indonesia	0.4	2.2	1.9	1.4	2.9	3.8	3.9	5.8
Lao PDR	0	0	0	0	0	0	0	0
Malaysia	0.1	0.9	0.8	0.5	1.3	1.6	1.5	2.1
Myanmar	0.5	2.1	1.9	1.5	3.4	4.0	3.6	5.3
Philippines	7.0	25	24	20	50	87	86	118
Singapore	20	78	68	52	117	171	160	229
Thailand	0.7	2.6	2.3	1.8	3.7	5.1	4.9	7.2
Viet Nam	36	54	64	90	92	106	109	145
ASEAN total	**66**	**166**	**164**	**168**	**272**	**381**	**371**	**515**

Source: AJC, based on data from World Trade Organization (Trade in Services data by Mode of Supply (TISMOS)).

Box 3. **Hospitals and healthcare providers in ASEAN**

Tables B3.1 and B3.2 show that intraregional investment from member countries with relatively more advanced medical and health services (i.e., Indonesia, Malaysia, Singapore, and Thailand) is predominant in the region. However, the recipients of the services cover all Member States since each investment serves different kinds of demand within the region. On one hand, hospitals and healthcare providers invest in countries with a similar quality of services to offer high-quality services at affordable prices. For example, IHH Healthcare (Malaysia) and Bangkok Dusit Medical Services (Thailand) have their presence in Singapore to enjoy their cost advantages over local services providers. On the other hand, foreign hospitals and healthcare providers established their branches in countries with less advanced medical and health services to serve the unmet need due to underdeveloped medical and health services in those countries, especially in Cambodia, Lao PDR, Myanmar, and Viet Nam (table B3.2).

Box table B3.1. **Top 15 major hospitals and healthcare providers in ASEAN, by assets, 2018**

Company	Headquarters	Total assets (Millions of dollars)	Presence in other ASEAN countries
IHH Healthcare	Malaysia	9 584	Brunei Darussalam, Indonesia, Myanmar (under development), Singapore, Viet Nam
Bangkok Dusit Medical Services	Thailand	3 765	Cambodia, Lao PDR, Myanmar, Singapore
KPJ Healthcare	Malaysia	1 042	Indonesia, Thailand
Raffles Medical Group	Singapore	753	Cambodia, Indonesia, Viet Nam
Bumrungrad Hospital	Thailand	721	Myanmar
Siloam International Hospitals	Indonesia	559	Myanmar
Thonburi Healthcare	Thailand	550	Myanmar
Bangkok Chain Hospital	Thailand	389	Lao PDR
Thomson Medical Group	Singapore	180	Indonesia, Malaysia, Viet Nam
Q&M Dental Group	Singapore	165	Malaysia
Cordlife Group	Singapore	144	Indonesia, Malaysia, Philippines, Thailand
Singapore Medical Group	Singapore	125	Indonesia
Health Management International	Singapore	97	Indonesia, Malaysia
ISEC Healthcare	Singapore	54	Malaysia, Myanmar
Clearbridge Health	Singapore	51	Indonesia, Malaysia, Philippines

Source: ASEAN Secretariat and UNCTAD, ASEAN Investment Report 2019.

Box 3. **Hospitals and healthcare providers in ASEAN** (Conluded)

Box table B3.2. **ASEAN healthcare services providers in CLMV countries**

Investor	Headquarters	Hospital	Host country	Equity ownership (%)	Year	Remarks
OUELH	Singapore	Yoma Siloam Hospital Pun Hlaing Limited	Myanmar	40	2019	Investor is part of the Indonesian Lippo conglomerate.
		Pun Hlaing International Hospital Limited	Myanmar	35	2019	
Thomson Medical Group	Singapore	Hanh Phuc International Hospital	Viet Nam	Medical collaboration	2011	Investor helps co-develop operational procedures and policies for nurses and non-medical departments of the hospital.
Singapore Medical Group	Singapore	Care Plus Clinic Vietnam (CCVN)	Ho Chi Minh City	47 (in CityClinic Asia Investment (CCAI))	2017	Investor provides training to hospital in marketing. CCAI has a 100% foreign investor license for healthcare operations in Viet Nam.
Wattana Medical Group	Thailand	Alliance International Medical Center (AIMC)	Vientiane, Lao PDR	..	2011	AIMC is a joint venture between New Chip Xeng Group of Lao PDR and Wattana Medical Group.
Bangkok Chain Hospital	Thailand	Kasemrad International Hospital Vientiane	Vientiane, Lao PDR	76	2017	Joint venture with a Lao PDR investor to establish the hospital.
Singapore National Eye Center and Singapore National University Hospital	Singapore	FV Hospital (in Hanoi and Saigon Clinic)	Viet Nam	..	..	Collaboration between the hospitals.
Navis Capital	Malaysia	Hanoi French Hospital (L'hopital Francais de Hanoi)	Viet Nam	Investment	2016	Investor owns the hospital.
AJT Holdings	Singapore	Singapore Medical Center	Cambodia	Partnership: AJT manages the centre	2018	..

Source: ASEAN Secretariat and UNCTAD, ASEAN Investment Report 2019.

Box 4. **Japan's investment and involvement in health related and social services in ASEAN**

Investment in health related and social services from Japan in ASEAN is still limited but has high potential. In 2016, the Japanese Government created a new initiative called "the Asia Health and Human Well-Being Initiative" to improve the situation of Asian ageing societies by providing Japanese knowledge and expertise on nursing care and social welfare systems. Making use of various programmes and initiatives to improve health related and social services, such as Japan's Asia Health and Human Well-Being Initiative, provides incentives and business opportunities for ASEAN countries to develop and improve the quality of their healthcare systems and standards. Japanese companies are involved in the health related and social services industry in ASEAN through multiple channels, layers, and segments. Tables B4.1 and B4.2 give a comprehensive, but not exhaustive, list of Japanese institutions and companies in this industry and summarize their involvement.

Box table B4.1. **Japan's investment and involvement in hospital operations in ASEAN**

Japanese partner	Hospital partners in ASEAN	Headquarters	Type of connection	Remarks
Mitsui	IHH Healthcare	Malaysia	Equity stake investment	Strategic investment by Mitsui
Gakken Cocofump Holdings	Health Management International	Singapore	Knowledge sharing	Partnership with Japan's leading elderly care provider (Gakken Cocofump) on training and best practices on community care and home caregiver segments in Singapore and the region
Sano Hospital	Bangkok Dusit Medical Services Group	Thailand	Knowledge sharing, patient referrals	Joint cooperation to study and develop projects on gastrointestinal tract disease and patient referrals
Universal Strategy Institute	Bangkok Dusit Medical Services Group	Thailand	Collaboration	Collaboration on a radiation centre, which will use heavy ion therapy technology
Nagoya University	Bangkok Dusit Medical Services Group	Thailand	Medical training and patient referrals	Training medical personnel and enabling patient referrals
Sanno Hospital and International University of Health and Welfare	VinMec Healthcare System	Viet Nam	Technology cooperation	Technology transfer and capacity-building with VinMec hospital

Source: AJC, based on ASEAN Secretariat and UNCTAD, ASEAN Investment Report 2019.
Note: All Japanese partners have their headquarters in Japan.

Box 4. **Hospitals and healthcare providers in ASEAN** (Conluded)

Box table B4.2. **Japanese companies in ASEAN's healthcare value chain**

Value chain	Nursing and care homes	Hospitals and medical services	Distribution and retailing of pharmaceuticals and devices	Manufacturing of pharmaceuticals and devices	R&D	Knowledge collaboration and training
Objective	Provide nursing and care homes for patients and the elderly	Invest and provide preventive and curative care services	Distribute, sell, and market pharmaceutical products and devices in the host country and in the region	Manufacture pharmaceutical products and devices	Undertake medical related R&D activities	Collaborate on sharing of knowledge and establish facilities for training
Corporate examples	Star Partners (in Thailand)	Sakurajyuji Group (in Thailand)	Nipro (in Indonesia, Malaysia, Singapore)	Nipro (in Indonesia, Thailand)	Takeda Pharmaceutical (in Singapore)	Olympus (in Indonesia, Thailand)
	Riei (in Thailand)	Kaikoukai Group (in Indonesia)	Omron Healthcare (in Indonesia, Singapore, Thailand)	Omron Healthcare (in Viet Nam)	Hoya (in Singapore)	Fujifilm (in Viet Nam)
	Sakura Cross Clinic (in Thailand)	Mitsui & Co (in Malaysia)	Shimadzu (in Malaysia)	Sysmex (in Singapore)	Kyowa Hakko Kirin (in Singapore)	Mediva (in Myanmar)
	Long Life Holding (in Indonesia)	Mediva Inc (in Viet Nam)		Shimadzu (in Philippines, Viet Nam)	Shimadzu (in Singapore)	
	Medical Care Services (in Malaysia)	Mitsubishi Corporation (in Myanmar)		Mani (in Myanmar, Viet Nam)	Olympus (in Singapore)	
	Oubaitouri (in Viet Nam)	Sanshikai (in Myanmar)				
	Tetsuyu (in Singapore)	Itochu Corporation (in Indonesia)				
		Marubeni (in Philippines)				

Source: AJC, based on ASEAN Secretariat and UNCTAD, ASEAN Investment Report 2019.
Note: All Japanese partners have their headquarters in Japan.

4. Mode 4: Supply through the movement of natural persons

Mode 4 is the least active among all modes of services. In part, the presence of natural persons for the supply and the receipt of cross-border health related and social services is not well documented. Moreover, barriers such as the laws and regulations of health-related occupations (e.g., doctors and nurses, among others) as well as language and communication largely prevent natural persons from moving across borders. Liberalization in terms of intraregional ASEAN agreements on common laws and regulations on health-related occupations, including those in Mutual Recognition Agreements (MRAs), may partly help promote greater volumes of exports and imports of the services in Mode 4.

(a) Exports

The size of exports of health related and social services from Singapore and the Philippines has been limited but higher than that of other AMS. Singaporean doctors and other health-related professionals move across borders to provide their services, whereas the Philippines mainly exports their nurses and caregivers to countries, such as Japan and the United States. In 2017, Singapore's exports accounted for $72 million or 75% of ASEAN's total exports of health related and social services in Mode 4, while the Philippines is the second-largest exporter in ASEAN and occupies almost the rest of the export share ($15 million or 15% in 2017) (table 9).

(b) Imports

Among AMS, the Philippines and Singapore are the top importers of health related and social services in Mode 4. The volume of imports to the Philippines and Singapore in 2017 was $31 million and $29 million, respectively (table 9). The import volume of both countries accounts more than 90% of ASEAN's total imports. Other AMS demonstrate a very limited import volume of the services.

Table 9. **Trade in Mode 4 of health related and social services, 2005–2017**
(Millions of dollars)

Country	Annual average 2005-2010	2011	2012	2013	2014	2015	2016	2017
Exports								
Brunei Darussalam	0	0	0	0	0	0	0	0.0003
Cambodia	0.063	0.071	0.160	0.067	0.160	0.014	0.023	0.037
Indonesia	0.9	1.9	2.5	2.3	1.8	1.3	1.1	1.6
Lao PDR	0	0	0	0	0	0	0	0
Malaysia	3.24	0.63	0.67	0.80	1.10	1.50	1.50	1.90
Myanmar	0	0	0.0000002	0	1.3	4.0	3.6	1.2
Philippines	0.9	3.1	3.6	4.6	11	12	12	15
Singapore	12	37	44	39	51	63	66	72
Thailand	3.4	3.5	3.1	2.9	2.3	2.2	2.3	2.6
Viet Nam	0.7	0.6	1.1	1.1	2.6	2.0	1.3	1.4
ASEAN total	**21**	**47**	**55**	**51**	**71**	**86**	**88**	**96**

.../

Table 9. **Trade in Mode 4 of health related and social services, 2005–2017** (Millions of dollars) (Concluded)

Country	Annual average 2005-2010	2011	2012	2013	2014	2015	2016	2017
Imports								
Brunei Darussalam	0.001	0.012	0.019	0.016	0.021	0.001	0.029	0.065
Cambodia	0.3	0.5	0.4	0.2	0.3	0.1	0.1	0.2
Indonesia	1.0	1.7	2.2	2.1	1.9	0.5	0.4	0.4
Lao PDR	0	0	0	0	0	0	0	0
Malaysia	0.616	0.009	0.372	0.004	0.352	0.722	0.483	0.754
Myanmar	0	0	0	0	0	0	0	0
Philippines	2.6	4.8	3.5	5.4	9.3	40	19	31
Singapore	4.7	14	16	20	24	32	30	29
Thailand	0.7	0.5	0.6	0.5	0.5	0.7	0.7	0.8
Viet Nam	1.8	1.9	1.4	3.2	4.6	3.6	2.7	2.4
ASEAN total	**12**	**23**	**25**	**32**	**41**	**78**	**54**	**64**

Source: AJC, based on data from World Trade Organization (Trade in Services data by Mode of Supply (TISMOS)).

IV. TRADE AGREEMENTS AND REGULATIONS AMONG AND IN THE ASEAN MEMBER STATES

The AFAS is the main trade agreement concerning the liberalization of trade in health related and social services. It is a progressive agreement with subsequent "packages" offering deeper commitments for trade liberalization. Annex A provides the specific commitments and remaining restrictions for every ASEAN country for trade in health related and social services under the AFAS 10th Package, the latest and final one under this framework. Further liberalization will be continued within ATISA. In order to assess the degree of liberalization under the AFAS, the Hoekman Index can be applied.[4] The higher the figure, the more liberal the country's service trade commitments are to the ASEAN members. Using the database constructed for this study, the "Hoekman Index" is derived for each of the 155 sub-sectors of the health related and social services of ASEAN countries. Then simple averages are calculated at the level of each sub-sector for each country and, finally, an average index is constructed for the entire health related and social services sector. It has to be

[4] Hoekman (1995) proposed an indexation method for measuring the GATS-style degree of commitments in the services sector by four modes of cross-border services delivery. Using this method, values are assigned to each of eight cells (for four delivery modes and two aspects of liberalization, concerning market access and national treatment, thereby making 4 times 2 = 8 cell entries) of a single table concerning one country and one type of service (e.g., 8A. Hospital Services). Values are assigned as follows: "1" means that the sector is "fully liberalized"; "0.5" that liberalization is limited, but bound (which means that, even if liberalization is partial, a country took a commitment not to withdraw it); "0" indicates that the Government has not committed to liberalize. For the aggregation of the values of the degree of liberalization (from 1=full liberalization to 0=no liberalization), simple averages are calculated for subsectors, sectors, and countries. As shown, it is a simple but objective indexation method, applying the numerical estimates (i.e., discrete points of 0, 1, or 0.5) to sometimes ambiguous legal texts. Based on the "law of large numbers", aggregation of these values is expected to reflect the degree of service trade liberalization by sector, sub-sector, and country.

noted that Mode 4 was left out of the calculations, as it is not covered by AFAS and is subject to a separate agreement on the movement of natural persons. Using the database constructed for this study, the "Hoekman Index" is derived, based on the specific commitment tables (reproduced in Annex A).

Table 10 shows the results of the calculation. Overall, there is a divergence observed concerning the liberalization of health related and social services. Also, the sectoral classifications applied and their coverage for liberalization are rather domestically oriented (sometimes rearranging the sequence of subsectors, and commitments without corresponding Customs Procedure Codes (CPCs)). This makes it hard to calculate the Hoekman Index value and may result in an overestimated degree of trade liberalization. In fact, the health related and social services sector is one of the least-committed sectors, in which less than 50 WTO members committed in one of the four health services sub-sectors.[5] With this in mind, a preliminary assessment has been attempted.

The average index value for all countries, modes, and the entire health related and social services sector is 0.83, which is rather high, considering that 1 means full liberalization. Mode 2 has the highest value of 0.95, followed by mode 1 (0.81) and Mode 3 (0.74). This implies that Mode 3 remains relatively restricted in the trade in health related and social services of ASEAN countries.

The following is a summary of the liberalization commitments and remaining restrictions by country:

Brunei Darussalam: The health related and social services sector is open, with a total index score of 0.92;

Cambodia: The health related and social services sector is open (the index value is 0.83), although domestically defined subsectors are mentioned for liberalization;

Indonesia: While hospital services are rather open (the index value is 0.83), other health related and social services are not liberalized; Mode 3 regulations include "joint venture with foreign equity participation limitation" for market access, and "subject to qualification and licensing requirement and procedure including registration";

Lao PDR: The health related and social services sector is rather open (with an index value of 0.71), while "other services" are not committed;

Malaysia: The health related and social services sector on the whole is highly open (with an index value of 0.94);

Myanmar: The health related and social services sector on the whole is highly open (with an index value of 0.96);

Philippines: Mode 1 is unbound because of a lack of technical feasibility; foreign equity participation is limited for some sectors in Mode 3; otherwise, this sector is open (and the total average index value is 0.56, yet this is because of the perceived lack of technical feasibility of supplying services in mode 1).

Singapore: Human health services as well as social services are not fully open; otherwise, the health and social services sector is liberalized (with an average index value of 0.75);

Thailand: The health related and social services sector on the whole is highly open (with an index value of 0.92);

Viet Nam: Foreign equity participation has upper limits for some sub-sectors; otherwise, the health and social services sector is open (the index value is 0.92).

[5] https://www.wto.org/english/tratop_e/serv_e/health_social_e/health_social_e.htm

Potential of the ASEAN Trade in Services Agreement (ATISA)

ASEAN is transitioning from the positive-list based AFAS to the negative-list oriented ATISA. In order to achieve the above workable policy recommendations, the ASEAN Trade in Services Agreement (ATISA) has a large potential. Drastically liberalized trade in health related and social services under ATISA can be predicted by considering existing negative-list oriented trade frameworks. Some ASEAN members are signatory to the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP), as in Annex B. This annex lists the reserved sub-sectors for health related and social services under this agreement. As shown, not so many areas are reserved, i.e., the market opening of the health related and social services is high. This implies that under the proposed ATISA, the degree of market opening would also be high, while avoiding commitments using domestically oriented sub-sector classifications, to facilitate the harmonized realization of innovative health related and social services.

Table 10. **Hoekman Index by ASEAN Member State for health related and social services (under AFAS 10th package)**

			Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	Simple average
08.A. Hospital Services	9311/93110	Mode 1	0.50	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.85
		Mode 2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Mode 3	1.00	1.00	0.50	1.00	1.00	0.75	0.75	1.00	0.75	1.00	0.88
		Average	0.83	1.00	0.83	1.00	1.00	0.92	0.58	1.00	0.92	1.00	0.91
08.B. Other Human Health Services	9319 (other than 93191)	Mode 1	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.50	1.00	1.00	0.85
		Mode 2	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		Mode 3	1.00	1.00	0.50	0.75	0.75	0.75	0.50	1.00	0.75	0.50	0.75
		Average	1.00	1.00	0.83	0.92	0.92	0.92	0.50	0.83	0.92	0.83	0.87
08.C. Social Services	933	Mode 1	1.00	0.50	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.75
		Mode 2	1.00	0.50	1.00	1.00	1.00	1.00	1.00	0.50	1.00	1.00	0.90
		Mode 3	0.75	0.50	0.50	0.75	0.75	1.00	0.75	0.00	0.75	0.50	0.63
		Average	0.94	0.63	0.83	0.92	0.92	0.98	0.56	0.33	0.92	0.83	0.79
08.D. Other		Mode 1	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.80
		Mode 2	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90
		Mode 3	0.75	0.50	0.50	0.00	0.75	1.00	0.75	1.00	0.75	1.00	0.70
		Average	0.92	0.83	0.83	0.00	0.92	1.00	0.58	1.00	0.92	1.00	0.80
Simple average		Mode 1	0.88	0.88	1.00	0.75	1.00	1.00	0.00	0.63	1.00	1.00	0.81
		Mode 2	1.00	0.88	1.00	0.75	1.00	1.00	1.00	0.88	1.00	1.00	0.95
		Mode 3	0.88	0.75	0.50	0.63	0.81	0.88	0.69	0.75	0.75	0.75	0.74
		All modes	0.92	0.83	0.83	0.71	0.94	0.96	0.56	0.75	0.92	0.92	0.83

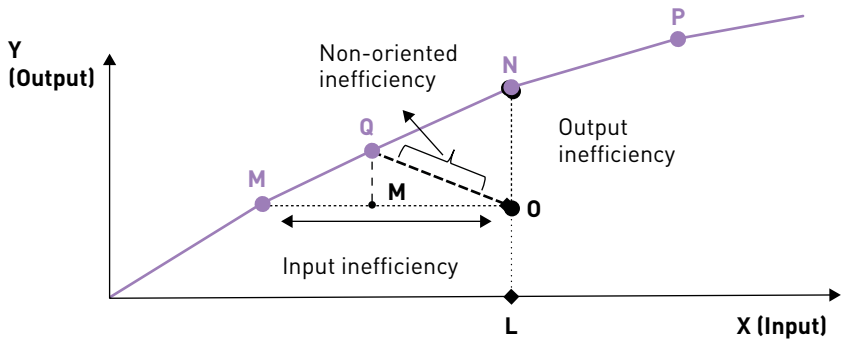
Source: AJC, based on the specific commitment tables under AFAS 10th package.
Note: See Annex A for the specific commitments of each country.

V. IMPACTS OF FURTHER LIBERALIZATION OF HEALTH RELATED AND SOCIAL SERVICES ON THE ECONOMY[6]

As discussed in Section I, human development depends on and determines economic and social development. This section examines the impact of further liberalization in health and social services on the economy by measuring the impact of the liberalization policies on the Human Development Index (HDI) of AMS. To understand the impact of further liberalization policies on HDI, it is necessary to examine whether the existing liberalization policies have yielded the maximum possible potential HDI. If the existing liberalization policies have not been working effectively, there will be a gap between the potential HDI and the achieved HDI. If there is a significant gap between the potential HDI and the achieved HDI, then it is imperative to close that gap before embarking on further liberalization measures.

The concepts of potential HDI and actually achieved HDI can be explained using the following diagram (figure 2):

Figure 2. **The concepts of potential HDI and actually achieved HDI**



Source: AJC.

In the above diagram, the inputs, such as agriculture value added, are plotted on the X-axis and the outputs, such as HDI, are on the Y-axis. M, Q, N, and P are potential HDI for different levels of inputs, such as agriculture value added. On the other hand, for the given level of input L, the achieved HDI is "O", while the potential HDI is N. With the given level of input L, it produces "OL" units of output (HDI) and it could increase by "ON" units to be on the potential frontier.[7] The gap between the achieved values and an estimated potential frontier value is attributed to "behind the border constraints" emanating from existing socioeconomic institutional rigidities. The vertical gap (ON)

[6] See Annex C for a data description, a theoretical model, and its empirical analysis.

[7] There are three ways to improve the performance of "O". One is to reduce its input to reach "M" or "Q" on the frontier, and the other is to increase its output to reach "N" on the frontier. As a result, DEA models thus, from the policy perspective, there are three orientations: input-oriented, output-oriented, and non-oriented.

from the potential frontier is called "output inefficiency", which shows to what extent output could be expanded while keeping inputs constant. The horizontal gap (OM) from the potential frontier is measured as "input inefficiency", meaning the extent to which inputs could be reduced without affecting output. Similarly, the distance of "OQ", which is measured as "non-oriented inefficiency", means the extent to which output could be expanded (RQ) and input could be reduced (OR). As the objective is to improve the HDI, from the policy perspective, the suggested path is to close the vertical gap (ON), which depends on using the inputs most effectively. The empirical analysis in this study concerns measuring the vertical gap that exists in the ASEAN countries.

The empirical analysis utilized data from the Organisation for Economic Cooperation and Development (OECD)'s Input-Output (IO) table to acquire uniform data between trade in education and health services. The OECD data is highly consistent with the data presented in Section III. Other trade and economic indicator data were obtained from the WTO, the World Bank, and the United Nations Educational, Scientific and Cultural Organization (UNESCO) for 2005–2015. HDI data were obtained from the United Nations Development Programme (UNDP).

With a panel data framework, the empirical model used to measure the impact of further liberalization on education and healthcare services on the HDI of ASEAN is as follows:

$$\begin{aligned} Log\ HDI_{it} = {} & \alpha_0 + \alpha_1\, Trade\ in\ education_{it} + \alpha_2\, Trade\ in\ healthcare_{it} + \\ & \alpha_3\, Policy\ impact\ on\ trade\ in\ education_{it} + \\ & \alpha_4\, Policy\ impact\ on\ trade\ in\ healthcare_{it} + \\ & \alpha_5\, Log\ agriculture\ value\ added_{it} + \alpha_6\, Log\ manufacturing\ value\ added_{it} + \\ & \alpha_7\, t + v_{ith} - u_{it} \end{aligned}$$

The HDI is a statistic composite index of health, education, and per capita income indicators (UNDP, 2018). Hence, the factors influencing HDI should reflect the status of the above three dimensions of HDI that exist within a country.

Hence, the variables for the empirical modelling have been selected based on the "human capital theory", initially formulated by Becker (1962), and other empirical studies. The human capital theory argues that individual workers have a set of skills or abilities which they can improve or accumulate through training and education. It should be noted here that "trade in education" is incorporated in the above empirical model. This formulation reflects the indispensable role of education, which can create opportunities for better health, as noted in the previous sections.[8] Health is both human capital itself and an input to producing other forms of human capital. Being unhealthy weakens the ability and willingness to work productively and reduces incentives to invest in human capital development. In this context, providing easy access and affordable healthcare services to residents of a country plays a crucial role in improving human development. For example, a healthcare programme of treating malaria in Nigeria increased workers' earnings by 10% in a few weeks (Dillon et al., 2014).

Given the financial constraints and lack of healthcare professionals in many developing countries, "trade in healthcare" is an important factor contributing to HDI. Acknowledging the fact that income is an important means to human development, the core sources of income generation at the national level—agriculture value added and the manufacturing value added are used as two important factors

[8] For the important linkage between education and health, see, e.g., "Why Education Matters to Health: Exploring the Causes" (https://societyhealth.vcu.edu/work/the-projects/why-education-matters-to-health-exploring-the-causes.html).

contributing to HDI. The liberalization of education and healthcare policies is gradual. Hence, the policy impacts on education and healthcare are modelled by multiplying the time trend (1 for 2005 and 11 for 2015) with the trade in education and trade in healthcare. Detailed discussion about the empirical modelling and estimation method is given in Appendix C.

The empirical result shows that the further liberalization of education and healthcare services has the potential to contribute to a significant improvement in HDI and, thereby, to the economy. The result reveals that the liberalization measures could have been more effective, as the member countries on average have realized only 82% of their potential HDI. In other words, member countries could improve their HDI by 18% without increasing their resources, but through effectively using them with the appropriate reform measures. Therefore, it is imperative first to raise the mean HDI from its current level by identifying and eliminating the existing socio-political and institutional rigidities at the individual country level. The result also implies the need for further liberalization in trade in health related and social services, which is reinforced by the positive and highly significant coefficients of the variable, "impact of liberalization of healthcare". In order to discuss what is needed for further liberalization, it is necessary to understand the existing constraints and challenges in trade in health related and social services in ASEAN that have implications for improving HDI (see Section VI).

VI. POLICY RECOMMENDATIONS AND PROMOTION MEASURES FOR TRADE IN HEALTH RELATED AND SOCIAL SERVICES

1. Challenges in the health related and social services industry in ASEAN

(a) Barriers to the further liberalization of health related and social services (ex-ante liberalization)

Depending on the appropriate regulatory conditions, the liberalization of trade in certain selected health services may improve quality and efficiency in healthcare nationally and regionally and contribute to increasing foreign exchange earnings. This, in turn, leads to higher human, economic, and social development, which is supported by the empirical results in Section V. Hence, it is obvious that there is an urgent need for further liberalization in health related and social services if ASEAN wants to achieve the objective of the AEC Blueprint 2025. At the same time, it is noted that further liberalization of ASEAN services trade is in the context of AFAS 10 and ATISA as the degree of liberalization is already considerably high in the GATS framework. The challenges deterring further liberalization of health related and social services are as follows.

Low attention paid to trade liberalization in health related and social services: As suggested in Section II, overall, the health related and social services sector has been subject to more reforms than liberalization by the ASEAN member countries. There are a very limited number of policies concerning trade liberalization and regional cooperation in this area.

Insufficient supply to catch up with the rising domestic and foreign demand: Given the size of the budget constraints in the majority of AMS, providing sustained basic health related and social services to the residents by government departments alone has been a challenging issue for policymakers. Moreover, there is always the dilemma for policymakers about how to divide resources between

providing basic health related and social services and promoting state-of-the-art technologies in such services. The AMS generally still have low UHC, while suffering from shortages of doctors, nurses, and facilities (especially for the ageing population), which constrains the efficient delivery of hospital services. The exceptions to the shortage of medical professionals are Brunei Darussalam, the Philippines, and Singapore (table 3). The issue of insufficient supply can be attributed to the following.

Underused Mode 1 (supply through cross-border trade): Despite the increasing trend for artificial intelligence solutions, tele-health and telemedicine, trade in Mode 1 seems underused in most of the AMS possibly due to underinvestment in technology and R&D and the low degree of liberalization of such services in the region. Insufficient levels of PPPs and foreign direct investment (FDI) also further contribute to the underuse of Mode 1.

Problems of attracting FDI (Mode 3): Though there are fewer restrictions on foreign ownership in the health related and social services sector in Cambodia, Lao PDR, Malaysia, Singapore, Thailand, and Viet Nam than in the rest of ASEAN, still the majority of the AMS have not opened up their economies significantly for the free movement of capital across countries. There are "behind the border" constraints emanating from socio-political institutional rigidities at different levels in all member countries (Basu Das et al., 2013). Those remaining constraints include limited domestic demand and purchasing power (in certain countries); harmonization of healthcare standards and mutual recognition among AMS; a lack of skills, technological capacity, and human resources; and limited government supports in terms of budget and administrative challenges (e.g. uncertainties in the implementation of laws and regulations and a lack of transparency, clarity and streamlining of investment procedures).

Limited free movement of labour (Mode 4): In this context, particular interest concerns the MRA on medical practitioners that was signed in 2009 and is being coordinated by the ASEAN Joint Coordinating Committee on Medical Practitioners. The objective of the MRA is to facilitate the mobility of medical services professionals within ASEAN to promote the adoption of best practices for professional medical services and provide opportunities for the capacity building and training of medical practitioners. The fuller implementation of the medical and nursing MRA is slow due to the resistance by the domestic health professionals to the inflow of foreign professionals. For example, the national regulations imposed due to the pressure from the Indonesian Medical Association have prevented foreign nurses (except specialist nurses) from providing services in Indonesia (Fukunaga, 2015). Another example concerns the Philippines' constitution, which appears to restrict foreign doctors from filling professional posts, though there are no reciprocal constraints to medical outmigration (McCall, 2014). In Thailand, a foreign medical practitioner wishing to work in the country needs to pass the National Medical Licence Examination of Thailand in which the final stage of "Objective Structured Clinical Examination" is conducted only in the Thai language (Wangchuk and Supanatsetakul, 2015). Thus, it is imperative to remove those restrictions to achieve the AEC Blueprint 2025 vision successfully within the prescribed timeframe.

(b) Potential risks from the liberalization and deregulation of health related and social services (ex-post liberalization)

Only a small group of people may benefit from the gains of the trade liberalization. Trade in health related and social services, in some cases, may exacerbate the existing problems of access and equity financing, especially for poor people. This section discusses the potential risks of the liberalization and deregulation of health related and social services (ex-post liberalization) as follows:

Trade-offs between higher quality and inequality in health related and social services: Promoting and sustaining the supply of quality health related and social services to all the citizens in a country

are core ingredients to human development and, thereby, to the economy. These services are considered differently from other services in the sense that they are treated as public goods with respect to the provision of basic health related and social services. Therefore, the most important argument levelled against the liberalization of trade in healthcare services concerns the entry of foreign healthcare services, which would encourage intra-country health professionals' movement from public hospitals to private hospitals and the concentration of health personnel only in the urban areas serving the middle-income and high-income earners at the cost of low-income earners. In other words, there are possibilities that the benefits of opening markets will be concentrated among the wealthy. Thus, it is argued by some that trade liberalization in healthcare services would aggravate intra-country healthcare inequities (Minh et al., 2014). The shortage can also occur due to the movement of health professionals from low-income countries to high-income economies (brain drain) (Mode 4), which may be construed by some as a disadvantage of liberalizing trade in healthcare services. In addition, it has been argued that medical tourism (Mode 2) through the liberalization of trade in health services may lead to an increase in the migration of doctors and patients from other countries, which may exert a negative influence on the health system of the host country (Gunawan, 2016).

2. Policy recommendations to promote trade liberalization

To address some of the challenges, the following policy options on liberalization and regional cooperation, and the promotion of PPPs and a better investment environment for domestic and foreign investors could be considered. Table 11 summarizes the challenges and corresponding policy recommendations.

(a) Policy recommendations to promote further trade liberalization of health related and social services (ex-ante liberalization)

Reforms with the implication of liberalization and regional cooperation: Acknowledging domestic constraints and challenges, the individual ASEAN member countries must undertake reforms with the implication of liberalization either directly or indirectly. In addition, trade in health related and social services through regional cooperation also plays a crucial role in providing sustained quality of such services in AMS. For example, the technically and financially advanced AMS could "share" clinical services intended for rare diseases. It is worth noting here, for example, Singapore maintains a sophisticated burns unit, which de facto serves the region (Minh et al., 2014).

If ASEAN is to sustain its philosophy of open regionalism as a model of development, then one would expect more foreign players in the construction and management of health and social services infrastructure, including build-operate-transfer schemes (Zen, 2012). Such schemes would particularly require a careful scrutiny of the financing issues concerning national basic healthcare systems and healthcare maintenance institutions. In this context, it is worth mentioning the flexibility that is built in the "ASEAN–X" formula, which gives freedom to member countries to liberalize according to their current situation.

Promotion of PPPs and a better investment environment for domestic and foreign investors: The provision of health related and social services at the advanced level along with improving the quality at the basic level, given government budget constraints, warrants the support of the private sector and FDI. This can mainly be done through further trade liberalization under ATISA and AEC Blueprint commitments in all four modes, especially Modes 1, 3, and 4.

Mode 1 – Increasing domestic capacity in medical technology: First, the government may increase the budget on R&D to develop medical technology, such as artificial intelligence solutions, tele-health, and telemedicine, in partnership with the private sector. Through PPPs, financing domestic start-ups in this industry could be one of the strategic policy options. Moreover, the government could improve a domestic investment environment that is conducive for MNEs and start-ups to establish operations in this industry. FDI could, in turn, further develop domestic medical technology.

Mode 3 – Strengthening investment promotion policies: To attract higher FDI, a mix of investment promotion policies is required. The main policy options would be as follows:

- Removal of the remaining entry and operational restrictions on international branches of health related and social services businesses after putting in place quality assurance frameworks;
- Establishment of a clear and transparent policy and regulatory framework; and
- Promotion of training programmes and general education to increase the necessary skills of domestic labour in health related and social services

Mode 4 – Implementation of the full MRA: The weakness in implementing the full MRA concerns the lack of institutional capacity in the regulatory bodies in the majority of the AMS. Mendoza and Sugiyarto (2017) have highlighted the need for providing sufficient funding with adequate legislative frameworks to maintain coordination among the professional bodies and relevant government agencies. It is imperative to encourage PPPs both at the national and regional levels to build effective healthcare services infrastructure through eliminating country-specific non-tariff barriers to trade and investment.

(b) Policy recommendations to counterbalance the negative impacts of the liberalization and deregulation of health related and social services (ex-post liberalization)

Quality control and consistent accreditation and certification: With further liberalization of healthcare services, human development is stimulated according to the empirical work undertaken for this study (Section V). As the main objectives of trade in health related and social services are to assure equity of access and to provide quality healthcare services to improve and sustain HDI at higher levels, priority should be given to those investors or institutions that have been accredited in their country of origin. Hospitals and other medical facilities within any ASEAN country should feel proud of their high standards in providing patient care, and in order to achieve those high standards, they need to subject their premises and medical systems to the most rigorous inspections by applying for accreditation and certification. This accreditation and certification should be carried out by an internationally qualified standards organization, such as the American Board of Medical Specialties or the Medical Board of Australia, that is different from the domestic healthcare organization under review.

Continuing Professional Development is a method through which members of the medical profession maintain, or improve their knowledge, skills, and professional performance. It is important that effective registration and certification systems are needed at the national and regional levels with respect to trade in medical education and healthcare services. Such a regulation will prevent unapproved institutions from partnering for making profit at the cost of quality. In this context, the harmonization of standards concerning health related services is important across AMS. As argued by Sugiyarto and Agunias (2014), some national professional associations may look at the ASEAN Qualification Framework, which is established to harmonize regulatory arrangements between the Member States by aligning the national frameworks according to a common reference, as a threat. Regional agreements do have a crucial role to play concerning regulatory cooperation.

The drawback of the weak alignment of national regulatory framework with the regional framework can be eliminated by effectively implementing Articles 1 (b) and (c) of the ASEAN Framework Agreement on Services, which are as follows: "(b) to eliminate substantially restrictions to trade in services amongst Member States; and (c) to liberalise trade in services by expanding the depth and scope of liberalisation beyond those undertaken by Member States under the GATS with the aim to realising a free trade area in services."

Promotion of equal access to quality health related and social services through UHC: To counterbalance the possible negative impacts of trade liberalization in health related and social services, the government must push forward the commitment toward UHC, including public insurance and large-scale primary care. Another major challenge for governments is to determine how much the private sector should be allowed to provide public services. On one hand, the privatization of health related and social services may aggravate the problem of inequality of access to the services. On the other hand, without privatization, government have difficulties in securing universal quality services for their citizens. Accounting for these possible negative impacts in policy formation would, therefore, help promote equity in health related and social services.

In conclusion, trade liberalization in health related and social services has become a crucial issue. Liberalization is expected to open up the markets for health related and social services in the economies, which will facilitate investment from the domestic private sector and global investors. Trade in health related and social services will expand the quality supply, which is in shortage in many AMS, and eventually reduce the cost of these services by improving competition. Thus, liberalization in trade in health related and social services is instrumental in preparing a highly productive human capital, which is a key ingredient to economic growth.

It is important from the policy perspective to strengthen health related and social services to improve and sustain HDI nationally and regionally. In light of the existing technical and financial constraints in the majority of the AMS, improvement in health related and social services necessitates the liberalization of trade in this area to eliminate barriers to the mobility of healthcare professionals and services across countries. Moreover, national trade policy in healthcare may not be considered in isolation from regional healthcare policy, such as the full implementation of the health-related MRAs. This requires support from broader trade and immigration policies and a stronger political commitment to avoid the brain-drain scenario leading to shortages of healthcare professionals in some countries. The responsibility of the policy makers in the AMS is to strike an optimal balance between competing national interests and support for the effective implementation of MRAs. Drawing on the suggestions made in the AEC Blueprint 2025, member countries can make use of the opportunities to deliberate facilitating the cross-border movement of health personnel and investment depending on the host countries' demand and supply conditions towards sustaining the well-being of their residents.

Table 11. **Summary of challenges and policy recommendations**

	Issues/Challenges	Policy options/Recommendations
Ex-ante liberalization	Low attention paid on trade liberalization in health related and social services Insufficient supply to catch up with the rising domestic and foreign demand: - Underused Mode 1 (supply through cross-border trade) - Problems of attracting foreign direct investment (FDI) (Mode 3) - Limited free movement of labour (Mode 4)	• Reforms with the implication of liberalization and regional cooperation • Promotion of public-private partnerships (PPPs) and a better investment environment for domestic and foreign investors • Increasing domestic capacity in medical technology • Strengthening investment promotion policies: - Removal of the remaining entry and operational restrictions on international branches of health related and social services business after putting in place quality assurance frameworks - Establishment of a clear and transparent policy and regulatory framework - Promotion of training programmes and general education to increase necessary skills of domestic labour in health related and social services • Implementation of the full Mutual Recognition Agreements (MRAs)
Ex-post liberalization	Trade-offs between higher quality and inequality in health related and social services - Brain drain and shortage of human resources in health related and social services due to the migration and concentration of healthcare personnel in certain areas (Mode 2 and Mode 4)	• Quality control and consistent accreditation and certification • Promotion of equal access to quality health related and social services through universal health coverage (UHC)

Source: AJ.

REFERENCES

Akkhavong, K., Paphassarang, C., Phoxay, C., Vonglokham, M., Phommavong, C., and Pholsena, S. (2014). Lao People's Democratic Republic Health System Review. Geneva: World Health Organization.

Annear, P.L., Grundy, J., Ir, P., Jacobs, B., Men, C., Nachtnebel, M., et al. (2015). The Kingdom of Cambodia Health System Review. 5 (2). Manila: World Health Organization, Regional Office for the Western Pacific.

ASEAN Secretariat and UNCTAD (2019). ASEAN Investment Report 2019 – FDI in Services: Focus on Health Care. Jakarta: ASEAN Secretariat.

Aung, T.K. (2012). Care for the Aged in Myanmar. Presented at HelpAge International Asia-Pacific Regional Conference on Aging 2012. https://www.slideshare.net/HelpAgeInternational/care-for-the-aged-in-myanmar-a-khaing

Basu Das, S., Menon, J., Severino, R., and Shrestha, O.L. (2013). The ASEAN Economic Community: A Work in Progress. Manila and Singapore: ADB; ISEAS.

Becker, G.S. (1962). Investment in Human Capital: A Theoretical Analysis. *Journal of Political Economy*, 70 (5), pp. 9–49.

Borneo Bulletin (2018a). Care, Development for Elderly a Priority in Brunei. https://borneobulletin.com.bn/care-development-for-elderly-a-priority-in-brunei/

Borneo Bulletin (2018b). National Study on Elderly Persons in Brunei. http://annx.asianews.network/content/national-study-elderly-persons-brunei-78974

Chanda, R. (2017). Trade in Health Services and Sustainable Development. ADBI Working Paper 668. Tokyo: Asian Development Bank Institute.

Coelli, T. (1996). A Guide to FRONTIER Version 4.1: A Computer Program for Stochastic Frontier Production and Cost Function Estimation. Working Paper 96/07, Aemidale: Centre for Efficiency and Productivity Analysis, University of New England.

Dayrit, M.M., Lagrada, L.P., Picazo, O.F., Pons, M.C., and Villaverde, M.C. (2018). *The Philippines Health System Review*, 8 (2). New Delhi: World Health Organization, Regional Office for Southeast Asia.

Dillon , A., Friedman, J., and Serneels, P. (2014). Health Information, Treatment, and Worker Productivity: Experimental Evidence from Malaria Testing and Treatment Among Nigerian Sugarcane Cutters. s.l.: CBESS Discussion Paper.

European Chamber of Commerce in Myanmar (2017). Healthcare Guide 2018. Yangon: European Chamber of Commerce in Myanmar.

Foundation of Thai Gerontology Research and Development Institute (2017). Situation of the Thai Elderly 2015. Bangkok: Foundation of Thai Gerontology Research and Development Institute. http://www.ipsr.mahidol.ac.th/ipsrbeta/FileUpload/PDF/Report-File-535.pdf

Frontier Myanmar (2017). Myanmar's Needy Elderly. https://frontiermyanmar.net/en/myanmars-needy-elderly

Fukunaga, Y. (2015). Assessing the Progress of ASEAN MRAs on Professional Services. Jakarta: Economic Research Institute for ASEAN and East Asia.

General Statistics Office (Viet Nam) (2016). Statistical Yearbook of Vietnam 2015. http://www.gso.gov.vn/default_en.aspx?tabid=515&idmid=&ItemID=16052

Government of Singapore (2016). 7 ways the Government is Helping Seniors. https://www.gov.sg/news/content/7-ways-the-government-is-helping-seniors

Gunawan, J. (2016). Thailand Medical Tourism and ASEAN Mutual Recognition Arrangement (MRA): Treat or Promise. *International Journal of Innovation in Medical Education and Research*, 2, pp.1–4.

Kalirajan, K. and Shand, R. (1994). Economics in Disequilibrium: An Approach from the Frontier. New Delhi: Macmillan.

Khomphonh, S. (2017). Current Situation of Active Aging in the Lao PDR. Presentation at the 3rd ASEAN-Japan Active Aging Conference. http://aging-asia.info/active-aging

Mary Brown Legal (2015). Vietnam Changes in Health Insurance Regulations. https://www.mayerbrown.com/Vietnam-Changes-in-Health-Insurance-Regulations-03-09-2015

McCall, C. (2014). Southeast Asian Countries to Allow Free Flow of Doctors. *The Lancet*, 383, pp. 771–772.

Mendoza, D.R. and Sugiyarto, G. (2017). The Long Road Ahead: Status Report on the Implementation of the ASEAN Mutual Recognition Arrangements on Professional Services. Manila: Asian Development Bank.

Minh, H.V., Pocock, N.S., Chaiyakunapruk, N., Chhorvann, C., Duc, H.A., Hanvoravongchai, P., Lim, J., Lucero-Prisno, D.E., Ng, N., Phaholyothin, N., Phonvisay, A., Soe, K.M., and Sychareun, V. (2014). Progress toward Universal Health Coverage in ASEAN. *Global Health Action*, 7(1), pp. 1–12.

Ministry of Health (Myanmar) (2014). Health in Myanmar 2014. http://mohs.gov.mm/ckfinder/connector?command=Proxy&lang=en&type=Main&currentFolder=%2FPublications%2FHealth%20In%20Myanmar%2F&hash=a6a1c319429b7abc0a8e21dc137ab33930842cf5&fileName=Health%20in%20Myanmar%20(2014).pdf

Ministry of Health (Viet Nam) (2016). Joint Annual Health Review 2016: Towards Healthy Aging in Vietnam. http://jahr.org.vn/downloads/JAHR2016/JAHR2016_Sum_EN.pdf

Ministry of Health, Labour and Welfare (Japan) (2013). The Republic of the Union of Myanmar: Country Report on "The 11th ASEAN & Japan High Level Officials Meeting on Caring Societies". https://www.mhlw.go.jp/bunya/kokusaigyomu/asean/2013/dl/Myammar_CountryReport.pdf

Ministry of Health, Labour and Welfare (Japan) (2014). Brunei Darussalam: Country Report on "The 12th ASEAN & Japan High Level Officials Meeting on Caring Societies". https://www.mhlw.go.jp/bunya/kokusaigyomu/asean/2014/dl/Brunei_CountryReport.pdf

Myint, P. (2015). Myanmar Health System: Organization and Goals. Presented at Symposium on "A Review on Health Systems in Transition in Myanmar", 7 January 2015. https://www.themimu.info/sites/themimu.info/files/documents/Presentation_Myanmar_Health_System_Organization_Goals_07Jan2015.pdf

Sebastian, A., Alzain, M.A., Asweto, C.O., Guo, X., Song, Y., Wang, Y., and Wang, W. (2016). The Maylasian Health Care System: Ecology, Plans and Reforms. Family Medicine and Community Health, 4(3), pp. 19–29.

Sugiyarto, G., and Agunias, D.R. (2014). A 'Freer' Flow of Skilled Labour within ASEAN: Aspirations, Opportunities and Challenges in 2015 and Beyond. Bangkok and Washington, D.C.: International Organisation for Migration, Migration Policy Institute.

Sunusi, M. (2014). Intergenerational Family and Community Support: Implication to Social Participation and Contribution of Older Person. Presented at the 12th ASEAN & Japan High Level Officials Meeting on Caring Societies. https://www.mhlw.go.jp/english/policy/affairs/asean/dl/12th_sum_03-08.pdf

Thailand Board of Investment (2018). Thailand Is Emerging as Asia's Capital of Health and Wellness. https://qz.com/1413942/thailand-is-emerging-as-asias-capital-of-health-and-wellness/

United Nations Development Programme (UNDP) (2018). "Technical Notes: Calculating the Human Development Indices-Graphical Presentation". http://hdr.undp.org/sites/default/files/hdr2018_technical_notes.pdf

Vangkonevilay, P., Bouaravong, V., Chanthavixay, K., and Khamkeng, K. (2011). Health, Social Welfare and Employment in Lao PDR. Presented at the 9th ASEAN & Japan High Level Officials Meeting on Caring Societies. https://www.mhlw.go.jp/bunya/kokusaigyomu/asean/2011/dl/LaoPDR_CountryReport.pdf

Viet Nam News (2017). HCM City Suffers Shortage of Nursing Homes. Ha Noi: Viet Nam News.

Wangchuk, K. and Supanatsetakul, N. (2015). Foreign Medical Practitioners: Requirements for Medical Practice and Postgraduate Training in Thailand Under ASEAN Economic Community Liberalization in 2015. Asian Biomedicine, 9, pp.777–782.

World Health Organization (WHO) (2018). Overview of Lao Health System Development 2009-2017. Manila: World Health Organization Regional Office for the Western Pacific.

World Trade Organization (WTO) (1991). Sectoral Classification List (W/120). https://unstats.un.org/unsd/tradekb/Knowledgebase/Sectoral-Classification-List-W120

Zen, F. (2012). Capital Market Development and Financial Market Integration. Mid-Term Review of ASEAN Economic Community Blueprint. Jakarta: Economic Research Institute for ASEAN and East Asia.

ANNEX A.

SPECIFIC COMMITMENT TABLES FOR HEALTH RELATED AND SOCIAL SERVICES UNDER THE AFAS 10TH PACKAGE

Brunei Darussalam

Subsector	Limitation on market access	Limitation on national treatment
Medical and dental services (CPC 9312)	(1) None (2) None (3) None	(1) None (2) None (3) None
Services provided by midwives, nurses, physiotherapists and para-medical personnel (CPC 93191)	(1) None (2) None (3) None	(1) None (2) None (3) None
Hospital services (excluding laboratory and x-ray services) (CPC 9311/93110)	(1) Unbound* (2) None (3) None	(1) Unbound* (2) None (3) None
Laboratory services (CPC 9311X)	(1) None (2) None (3) None	(1) None (2) None (3) None
X-ray services (CPC 9311X)	(1) None (2) None (3) None	(1) None (2) None (3) None
Pharmaceutical services (CPC 9319)	(1) None (2) None (3) None	(1) None (2) None (3) None
Social services (other than 93191)	(1) None (2) None (3) Foreign equity participation should not exceed 70% subject to the approval of the relevant agencies.	(1) None (2) None (3) None
Child day-care services including day-care for the handicapped (CPC 93321)	(1) None (2) None (3) Foreign equity participation should not exceed 70% subject to the approval of the relevant agencies.	(1) None (2) None (3) None
Other health related and social services: Ambulance services (CPC 93194)	(1) None (2) None (3) Foreign equity participation should not exceed 70%.	(1) None (2) None (3) None

Source: AFAS 10th package.

Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

Cambodia

Subsector	Limitation on market access	Limitation on national treatment
Specialized medical services (CPC 93122) Specialized dental services (CPC 93123)	(1) None (2) None (3) None	(1) None (2) None (3) None
Hospital services (CPC 93110)	(1) None (2) None (3) None	(1) None (2) None (3) None
Ambulance services (CPC 93192)	(1) None (2) None (3) None	(1) None (2) None (3) None
Nursing services (CPC 93191)	(1) None (2) None (3) None	(1) None (2) None (3) None
Veterinary services for pet animals (CPC 93201)	(1) None (2) None (3) None, foreign equity participation is limited to maximum of 70%	(1) None (2) None (3) None
Vocational rehabilitation services (CPC 93324)	(1) None (2) None (3) None	(1) None (2) None (3) None

Source: AFAS 10th package.
Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

Indonesia

Subsector	Limitation on market access	Limitation on national treatment
Clinic of specialized medical services (only for registered health institution, with three sub-specialistic/super specialistic medical care/more specific than specialistic medical care) (CPC 93122) Clinic of specialized dental services, only for registered health institution, with specialistic dental care, provided by hospital of more than 50 dental units and chairs) (CPC 93123)	(1) None (2) None (3) Unbound	(1) None (2) None (3) Unbound
Clinic of specialized medical services (only for registered health institution, with three sub-specialistic/super specialistic medical care/more specific than specialistic medical care) in Makassar and Manado (CPC 93122) Clinic of specialized dental services, only for registered health institution, with specialistic dental care, provided by hospital of more than 50 dental units and chairs) in Makassar and Manado (CPC 93123)	(1) None (2) None (3) Joint venture with foreign equity participation up to 51%	(1) None (2) None (3) As indicated in the Horizontal Section and General Conditions the health professionals shall be Indonesian
Clinic of specialized medical services (only for registered health institution, with three sub-specialistic/super specialistic medical care/more specific than specialistic medical care) in capital province of East Indonesia Region (except in Makassar and Manado) (CPC 93122) Clinic of specialized dental services, only for registered health institution, with specialistic dental care, provided by hospital of more than 50 dental units and chairs) in capital province of East Indonesia region (except in Makassar and Manado) (CPC 93123)	(1) None (2) None (3) Joint venture with foreign equity participation up to 70%	(1) None (2) None (3) As indicated in the Horizontal Section and General Conditions the health professionals shall be Indonesian

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Other veterinary services (CPC 93209) Exclusively covers only poultry farm consultant services	(1) None (2) None (3) Joint venture company with foreign equity participation up to 70%	(1) None (2) None (3) Subject to qualification and licensing requirement and procedure including registration
Nursing services (only for specialistic care) (CPC 93191)	(1) None (2) None (3) Unbound	(1) None (2) None (3) Unbound
Nursing services (only for specialistic care) in Medan and Surabaya (CPC 93191)	(1) None (2) None (3) Joint venture company with foreign equity participation up to 51%	(1) None (2) None (3) As indicated in the Horizontal Section and General Condition the health professionals shall be Indonesian
Nursing services (only for specialistic care) in capital province of East Indonesia region (except in Makassar and Manado) (CPC 93191)	(1) None (2) None (3) Joint venture company with foreign equity participation up to 70%	(1) None (2) None (3) As indicated in the Horizontal Section and General Condition the health professionals shall be Indonesian
Hospital services (only for specialist and super specialist medical care/more specific than specialist medical care, provided by hospital of more than 200 beds) (CPC 9311)	(1) None (2) None (3) Unbound	(1) None (2) None (3) Unbound
Hospital services (only for specialist and super specialist medical care/more specific than specialist medical care, provided by hospital of more than 200 beds) in Medan and Surabaya (CPC 9311)	(1) None (2) None (3) Joint venture with foreign equity participation up to 51 %	(1) None (2) None (3)As indicated in the Horizontal Section and General Condition the health professionals shall be Indonesian
Hospital services (only for specialist and super specialist medical care/ more specific than specialist medical care, provided by hospital of more than 200 beds) in capital province of East Indonesia region (except in Makassar and Manado) (CPC 9311)	(1) None (2) None (3) Joint venture with foreign equity participation up to 70 %	(1) None (2) None (3)As indicated in the Horizontal Section and General Condition the health professionals shall be Indonesian
Other human health services (CPC 9319 other than 93191) Limited to residential health facilities services than hospital services only (CPC 93193)	(1) None (2) None (3) Joint venture foreign equity participation up to 70 %	(1) None (2) None (3) Subject to qualification and licensing requirement and procedure including registration
Social services (Social welfare services for the elderly) (Social welfare services for persons with disabilities) Social welfare training and education Social workers and care workers	(1) None (2) None (3) Joint venture foreign equity participation up to 70%	(1) None (2) None (3) Services shall be delivered indiscriminately
D. Other Specialistic centre in government / public hospital in capital city of East Indonesia region e.g. cancer specialistic care centre, cardiac centre, haemodialysis centre	(1) None (2) None (3) Aggregate foreign equity participation is permitted up to 70% provided that: up to 49% through foreign direct investment, and the remaining percentage through other mechanism	(1) None (2) None (3) The health professionals shall be Indonesian

Source: AFAS 10th package.

Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

Lao PDR

Subsector	Limitation on market access	Limitation on national treatment
Medical and dental services (CPC 9312) - General medical services (CPC 93121) - Specialized medical services (CPC 93122)	(1) None (2) None (3) None (only for private hospital)	(1) None (2) None (3) None
Private hospital services (Part of CPC 93110)	(1) None (2) None (3) None	(1) None (2) None (3) None
Services provided by midwives, nurses, physiotherapists, and para- medical personnel (CPC 93191)	(1) None (2) None (3) None (only for private hospital)	(1) None (2) None (3) None
B. Other human health services (CPC 9319 (Other than 93191)	(1) None (2) None (3) None (only for private hospital)	(1) None (2) None (3) None
C. Social services (CPC 933)	(1) None (2) None (3) None (only for private hospital)	(1) None (2) None (3) None

Source: AFAS 10th package.
Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

Malaysia

Subsector	Limitation on Market Access	Limitation on National Treatment
Specialized medical services (CPC 93122) Covering forensic medicine, nuclear medicine, geriatrics, micro vascular surgery, neurosurgery, cardiothoracic surgery, plastic surgery, clinical immunology and oncology, traumatology, anaesthesiology, intensive care specialist, child psychiatry and physical medicine	(1) None (2) None (3) Specialized medical services may be supplied only by a natural person	(1) None (2) None (3) None
Dental services (CPC 93123) Covering orthognathic surgery, cranio-facial surgery, oral oncology, forensic odontology and special needs dentistry	(1) None (2) None (3) Foreign equity shall not exceed 70%	(1) None (2) None (3) As in market access limitations
Veterinary services (CPC 932)	(1) None (2) None (3) Only through a locally incorporated joint-venture with Malaysian individuals or Malaysian-control corporation or both and aggregate share of foreign interest shall not exceed 70%	(1) None (2) None (3) None
Specialized nursing services (CPC 93191) - Intensive care nursing - Coronary care nursing - Peri-operative nursing - Neonatal nursing - Pediatric nursing - Emergency and trauma care - Oncology nursing - Gerontology - Renal nursing - Orthopaedic nursing - Ophthalmology nursing	(1) None (2) None (3) Services may be supplied by a natural person. The setting up of individual or joint group practices is not permitted.	(1) None (2) None (3) Unbound

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Private hospital services (CPC 93110*)	(1) None (2) None (3) Only through a locally incorporated joint venture corporation with Malaysian individuals or Malaysian-controlled corporations or both and aggregate foreign shareholding in the joint-venture corporations shall not exceed 70%	(1) None (2) None (3) Establishment of feeder outpatient clinics is not permitted
Private hospital services (CPC 93110*) Excluding the establishment of feeder outpatient clinics	(1) None (2) None (3) Only through a locally incorporated joint-venture corporation with Malaysian individuals or Malaysian-controlled corporations or both and aggregate foreign shareholding in the joint-venture corporations shall not exceed 70%	(1) None (2) None (3) None
Other human health services (CPC 93199) covering pharmacy services in the manufacturing sector only	(1) None (2) None (3) Foreign equity shall not exceed 70%	(1) None (2) None (3) None
Welfare services delivered through residential institutions to old person and the handicapped (CPC 93311) Vocational rehabilitation services for the handicapped (CPC 93324)	(1) None (2) None (3) Foreign equity shall not exceed 70%	(1) None (2) None (3) None
Other health related and social services n.e.c. Private centre for special needs persons	(1) None (2) None (3) Only through a locally incorporated joint-venture corporation with Malaysian individuals or Malaysian-controlled corporations or both and aggregate foreign shareholding in the joint-venture corporations shall not exceed 70%	(1) None (2) None (3) None

Source: AFAS 10th package.

Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

Myanmar

Subsector	Limitation on market access	Limitation on national treatment
Human health services A. Medical and dental services General medical services (CPC 93121)	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services, 2007	(1) None (2) None (3) None
Specialized medical services (CPC 93122)	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services, 2007	(1) None (2) None (3) None
Dental services (CPC 93123)	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services, 2007	(1) None (2) None (3) None
Veterinary services (CPC 932/9320)	(1) None (2) None (3) None	(1) None (2) None (3) None
Deliveries and related services, nursing services, physiotherapist and paramedical personnel (CPC 93191)	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services, 2007	(1) None (2) None (3) None
Hospital services (CPC 9311)	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services, 2007	(1) None (2) None (3) None
Ambulance services (CPC 93192)	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services, 2007	(1) None (2) None (3) None
Laboratory services	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services, 2007	(1) None (2) None (3) None
Residential health facilities services other than hospital services (CPC 93193)	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services, 2007	(1) None (2) None (3) None

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Other human health services (CPC 93199)	(1) None (2) None (3) Up to 70% foreign equity participation is permitted and to be accordance with the Law relating to Private Health Care Services 2007	(1) None (2) None (3) None
Social services without accommodation Early childhood care & development programme for children (CPC - 9332)	(1) None (2) None (3) None	(1) None (2) None (3) None

Source: AFAS 10th package.
Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

Philippines

Subsector	Limitation on market access	Limitation on national treatment
A. Hospital services (CPC 9311) B. Other human health services n.e.c. Laboratory services	(1) Unbound* (2) None (3) The limitations on foreign equity in the horizontal section do not apply	(1) Unbound* (2) None (3) None
i. Veterinary services Other veterinary services – specialized Hospital services for pets (CPC 93201**)	(1) None (2) None (3) Up to 70% foreign equity participation is allowed	(1) None (2) None (3) None
i. Veterinary medicine (CPC 932)	(1) None (2) None (3) Corporate practice is not allowed.	(1) None (2) None (3) None
Services relating to ergotherapy, speech therapy, homeopathy, and acupuncture provided by para-medical personnel (CPC 93191**)	(1) None (2) None (3) Up to 70% foreign equity participation is allowed	(1) None (2) None (3) None
C. Social services Welfare services delivered through residential institutions to old persons and the adult handicapped/differently-abled persons excluding social work practice (CPC 93311**)	(1) Unbound* (2) None (3) None, except that foreign equity participation is limited to a maximum of 70%	(1) Unbound* (2) None (3) None
D. Other Ambulance services ancillary to private hospitals (i.e., operated and owned by private hospitals for the benefit of their patients and not for hire) (CPC 93192**)	(1) Unbound* (2) None (3) Up to 70% foreign equity participation is allowed	(1) Unbound* (2) None (3) None

Source: AFAS 10th package.
Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

Singapore

Subsector	Limitation on market access	Limitation on national treatment
Medical services, specifically general medical services (CPC 93121) Specialized medical services (CPC 93122)	(1) Unbound* (2) None (3) None	(1) None (2) None (3) None
Dental services	(1) None (2) None (3) None	(1) None (2) None (3) None
Veterinary services	(1) None (2) None (3) None	(1) None (2) None (3) None
Deliveries and related services, nursing services, physiotherapists, and para-medical personnel (CPC 93191**)	(1) Unbound* (2) None (3) None	(1) None (2) None (3) None
Hospital services, except: (i) supply of health services by government-owned or controlled health institutions, and (ii) investments in government-owned or controlled health institutions (CPC 93110 **)	(1) None (2) None (3) None	(1) None (2) None (3) None
Ambulance services (CPC 93192)	(1) Unbound* (2) None (3) None	(1) Unbound* (2) None (3) None
Acute care hospitals, nursing homes and convalescent hospitals as defined by the Private Hospitals and Medical Clinics Act, run on a commercial basis (CPC 93193**)	(1) Unbound* (2) None (3) None	(1) Unbound* (2) None (3) None
Laboratories licensed under the Private Hospitals and Medical Clinics Act (CPC 931991**)	(1) None (2) None (3) None	(1) None (2) None (3) None
Social services delivered through residential institutions to old persons and the handicapped (CPC 93311)	(1) Unbound* (2) None (3) Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded	(1) Unbound* (2) Singapore retains the discretion to determine whether a non-resident service supplier may solicit business or conduct active marketing in Singapore (3) None
Social services delivered through residential institutions to children and other clients (CPC 93312 **)	(1) Unbound (2) Singapore retains the discretion to determine whether a non-resident service supplier may solicit business or conduct active marketing in Singapore. (3) Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded	(1) Unbound (2) Singapore retains the discretion to determine whether a non-resident service supplier may solicit business or conduct active marketing in Singapore (3) Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded

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Child day-care services including day-care services for the handicapped (CPC 93321) Vocational rehabilitation services (CPC 93324)	(1) Unbound (2) Singapore retains the discretion to determine whether a non-resident service supplier may solicit business or conduct active marketing in Singapore. (3) Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded	(1) Unbound (2) Singapore retains the discretion to determine whether a non-resident service supplier may solicit business or conduct active marketing in Singapore (4) Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded
Guidance and counselling services not elsewhere classified related to children (CPC 93322)	(1) Unbound (2) Unbound for a non-resident service supplier soliciting business or conducting active marketing in Singapore (3) Unbound for facilities/ service operations run by non-profit service suppliers that are partially or totally state-funded	(1) Unbound (2) Unbound for a non-resident service supplier soliciting business or conducting active marketing in Singapore (3)Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded
Welfare services not delivered through residential institutions (CPC 93323)	(1) None (2) Unbound for a non-resident service supplier soliciting business or conducting active marketing in Singapore (3) Unbound for facilities/ service operations run by non-profit service suppliers that are partially or totally state-funded	(1) None (2) Unbound for a non-resident service supplier soliciting business or conducting active marketing in Singapore (3) Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded
Other social services without accommodation (CPC 93329 **)	(1) Unbound (2) Singapore retains the discretion to determine whether a non-resident service supplier may solicit business or conduct active marketing in Singapore. (3) Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded	(1) Unbound (2) Singapore retains the discretion to determine whether a non-resident service supplier may solicit business or conduct active marketing in Singapore. (4) Unbound for facilities/service operations run by non-profit service suppliers that are partially or totally state-funded

Source: AFAS 10th package.

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Thailand

Subsector	Limitation on market access	Limitation on national treatment
Medical and dental services: - General medical services (CPC 93121) - Specialized medical services (CPC 93122)	(1) None (2) None (3) As indicated in 3.3 of the horizontal section and must only be OP clinic in a hospital. A person is allowed to operate not more than one sanatorium.	(1) None (2) None (3) The person who applies for the license to operate must have a domicile in Thailand
- Specialized medical services provided in private hospital (CPC Version 1.1: part of 93122) This subclass includes: - consultation services in paediatrics, gynaecology, obstetrics, neurology and psychiatry - surgical consultation services - analysis and interpretation of medical images(x-ray, electrocardiograms, endoscopies and the like) This subclass does not include: - services of medical laboratories, cf.93199	(1) None (2) None (3) As indicated in 3.1 of the horizontal section	(1) None (2) None (3) None
- Dental services (CPC 93123)	(1) None (2) None (3) As indicated in 3.3 of the horizontal section and must only be dental department in a hospital, not dental clinic nor dental hospital. A person is allowed to operate not more than one sanatorium.	(1) None (2) None (3) The person who applies for the license to operate must have a domicile in Thailand
Veterinary services: Veterinary services for pet animals (CPC 93201)	(1) None (2) None (3) As indicated in 3.3 of the horizontal section and a person is allowed to operate not more than one veterinary hospital	(1) None (2) None (3) The person who applies for the license to operate must have a domicile in Thailand
Veterinary services: Veterinary services for livestock (CPC Version 1.1: 93220)	(1) None (2) None (3) As indicated in 3.1 of the horizontal section	(1) None (2) None (3) None
Services provided by nurses (part of CPC 93191)	(1) None (2) None (3) As indicated in 3.3 of the horizontal section and must only be nursing department in a hospital. A person is allowed to operate not more than one sanatorium.	(1)None (2)None (3)The person who applies for the license to operate must have a domicile in Thailand
j) Nursing department of physiotherapeutic and paramedical services provided in a hospital. (CPC Version 1.1: 93191)	(1) None (2) None (3) As indicated in 3.1 of the horizontal section	(1) None (2) None (3) None
A. Hospital services (CPC 9311)	(1) None (2) None (3) As indicated in 3.3 of the horizontal section Thailand may prescribe, in any area, numbers of hospital, or types of medical services to be provided in the hospital. A person is allowed to operate not more than one hospital.	(1) None (2) None (3) The person who applies for the license to operate must have a domicile in Thailand

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A. Private Hospital services (CPC Version 1.1: 93110) This subclass does not include: -services delivered by hospital out-patient clinics, cf. 9312 - dental services, cf. 93123 - ambulance services, cf. 93192 - military hospital services - prison hospital services - nursing services - chronic case services	(1) None (2) None (3) As indicated in 3.1 of the horizontal section	(1) None (2) None (3) None
B. Other human health services (CPC Version 1.1: part of 93199) - Residential health facilities services other than hospital services, excluding non- overnight stay (CPC 93193)	(1) None (2) None (3) As indicated in 3.1 of the horizontal section	(1) None (2) None (3) None
C. Social services: Day-care services for children with disabilities (CPC Version 1.1: part of 93321)	(1) None (2) None (3) As indicated in 3.1 of the horizontal section	(1) None (2) None (3) None
D. Other: Diagnostic imaging services without analysis or interpretation, e.g., x-ray, ultrasound, and magnetic resonance imaging (MRI)	(1) None (2) None (3) As indicated in 3.1 of the horizontal section	(1) None (2) None (3) None

Source: AFAS 10th package.
Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

Viet Nam

Subsector	Limitation on market access	Limitation on national treatment
Medical and dental services (CPC 9312) covering: - General medical services (CPC 93121) - Specialized medical services (CPC 93122) - Dental services (CPC 93123) Nursing services, physiotherapists, and para-medical personnel (CPC 93191) Hospital services (CPC 9311)	(1) None (2) None (3) None	(1)None (2)None (3)None
Veterinary services (CPC 932/9320) 22	(1) None (2) None (3) Access is granted to natural persons exclusively for the conduct of private professional practice and under the authorisation by the veterinary authorities	(1)None (2)None (3)None
Other human health services	(1) None (2) None (3) None, except joint venture with the foreign capital contribution not exceeding 70% shall be permitted	(1) None (2) None (3) None, except as indicated in the market access column
Health related and social services social services (CPC 933) - Social services with accommodation (CPC 9331) - Social services without accommodation (CPC 9332)	(1) None (2) None (3) Unbound, except for foreign equity ownership permitted up to 70%	(1) None (2) None (3) None, except as indicated in the market access column

Source: AFAS 10th package.
Notes: * after a CPC code means the sector is part of the wider service sector elsewhere indicated. ** after a CPC code mean the sector is part of the wider service sector indicated by the CPC code. Unbound* means unbound due to lack of technical feasibility.

ANNEX B.

NEGATIVE LIST COMMITMENTS UNDER THE COMPREHENSIVE AND PROGRESSIVE AGREEMENT FOR TRANS-PACIFIC PARTNERSHIP (CPTPP) FOR HEALTH RELATED AND SOCIAL SERVICES

Note: The list is repeat verbatim.

Brunei Darussalam

Annex I
Not listed.

Annex II

Sector: Private Health Services

Sub-Sector:
Pharmacists, nurses, midwives and allied health services
Private laboratory services
Private radiology services

Obligations Concerned:
National Treatment (Article 9.4 and Article 10.3)
Performance Requirements (Article 9.10)
Senior Management and Boards of Directors (Article 9.11)
Market Access (Article 10.5)
Local Presence (Article 10.6)

Description:
Investment and Cross-Border Trade in Services
1. Brunei Darussalam reserves the right to adopt or maintain any measure relating to the private practice of pharmacists, nurses, midwives and allied health services.
2. Brunei Darussalam reserves the right to adopt or maintain any measure relating to the establishment of private laboratory services and private radiology services.

Sector: Private Health Services

Sub-Sector:
Private health centres or clinics

Obligations Concerned:
Performance Requirements (Article 9.10)
Senior Management and Boards of Directors (Article 9.11)
Market Access (Article 10.5)

Description:
Investment and Cross-Border Trade in Services
Brunei Darussalam reserves the right to adopt or maintain any measure relating to the establishment of private health centres or clinics, including but not limited to:
(a) requiring that such private health centres or clinics be established in the form of a joint venture with a Brunei Darussalam national;
(b) limiting the number of private health centres or clinics that can be established in Brunei Darussalam;
(c) requiring such private health centre or clinic to carry out research and development within the territory of Brunei Darussalam, or transfer of technology; and
(d) equiring a majority of the senior managers in the private health centres or clinics to be of Bruneian nationality.

Malaysia

Annex I
Sector:
Private Healthcare Facilities and Services
Allied Health Services

Obligations Concerned:
National Treatment (Article 9.4 and Article 10.3)
Local Presence (Article 10.6)

Level of Government: Central

Measures:
Medical Regulations 1974
Private Healthcare Facilities and Services Act 1998 [Act 586]
Private Healthcare Facilities and Services Regulations 2006
Registration of Pharmacists Act 1951 [Act 371]
Administrative Guidelines

Description:
Investment and Cross-Border Trade in Services
Private healthcare facilities and services can only be supplied by service suppliers that are registered and established in Malaysia and with authorization.
Foreigners are not allowed to establish blood banks, maternity homes, psychiatric hospitals, pathology laboratories or to practice as general dental practitioners, general medical practitioners, and general nurses including midwifery.
Specialized Dental Services
Foreigners are not allowed to provide specialized dental services or operate a specialized medical facility except in oral and maxillo-facial reconstructive surgery.
Pharmacists
Foreign pharmacists are not allowed to prepare, dispense, assemble, or sell medicinal products.
Allied health services
Foreigners are not allowed to supply allied health services which cover services such as clinical scientist, microbiologist, clinical biochemist, medical geneticist, biomedical scientist, embryologist, medical physicist, entomologist, forensic scientist, nutritionist, speech language pathologist/speech language therapist, audiologist, physiotherapist, counsellors, diagnostic radiographer, radiotherapist, food technologist, dietician, medical social officer, optometrist, health education officer, environmental health officer, medical laboratory technologist, healthcare food service assistant officer, assistant medical officer and assistant food technologist.

Annex II
Sector: Social Services

Obligations Concerned: National Treatment (Article 9.4 and Article 10.3)
Most-Favoured-Nation Treatment (Article 9.5 and Article 10.4)
Performance Requirements (Article 9.10)
Senior Management and Boards of Directors (Article 9.11)
Local Presence (Article 10.6)

Description:
Investment and Cross-Border Trade in Services
Malaysia reserves the right to adopt or maintain any measure with respect to the supply of law enforcement and correctional services, and the following services to the extent they are social services established or maintained for a public purpose: income security or insurance, social security or insurance, social welfare, public education, public training, health and child care.

Singapore

Annex I
Health services

Sector:
Health related and social services

Sub-Sector:
Medical services
Pharmacy services
Deliveries and related services, nursing services, physiotherapeutic and para-medical services and allied health services
Optometrists and opticians

Industry Classification:
Obligations Concerned:
Local Presence (Article 10.6)

Level of Government: Central

Measures:
Medical Registration Act, Cap. 174
Pharmacists Registration Act, Cap. 230
Medicines Act, Cap. 176,
Medicines (Registration of Pharmacies) Regulations, Cap. 176, Regulation 4
Nurses and Midwives Act, Cap. 209
Allied Health Professions Act, Act 1 of 2011
Optometrists and Opticians Act, Cap. 213A

Description:
Cross-Border Trade in Services
Only persons who are resident in Singapore are allowed to provide the following services: medical services, pharmacy services, deliveries and related services, nursing services, physiotherapeutic and para-medical services and allied health services and optometry and opticianry services.

Annex II
Sector: Health related and social services

Sub-Sector:
Medical services
Pharmacy services
Deliveries and related services, nursing services, physiotherapeutic and para-medical services, and allied health services
Optometrists and opticians

Industry Classification:
Obligations Concerned:
National Treatment (Article 10.3)
Market Access (Article 10.5)

Description: Cross-Border Trade in Services
Singapore reserves the right to adopt or maintain any limit on the number of service suppliers providing, including but not limited to, the following services: medical services, pharmacy services, deliveries and related services, nursing services, physiotherapeutic and para-medical services, allied health services, and optometry and opticianry services.
Singapore reserves the right to adopt or maintain any measure with respect to the regulation of service suppliers providing, including but not limited to, the following services: medical services, pharmacy services, deliveries and related services, nursing services, physiotherapeutic and para-medical services, allied health services, and optometry and opticianry services.

Existing Measures: Allied Health Professions Act 2011

Viet Nam

Annex I
Not listed

Annex II
Health services

Sector: Health related and social services

Sub-Sector:
Residential health facilities services other than hospital services (CPC 93193)
Other human health services (CPC 93199)
Social services (CPC 933)

Obligations Concerned:
National Treatment (Article 9.4 and Article 10.3)
Most-Favoured-Nation Treatment (Article 9.5 and Article 10.4)
Performance Requirements (Article 9.10)
Senior Management and Boards of Directors (Article 9.11)
Local Presence (Article 10.6)

Description:
Investment and Cross-Border Trade in Services
Viet Nam reserves the right to adopt or maintain any measure with respect to the listed sub-sectors.

Existing Measures:
Health services
(medical as compared with GATS)
Services provided by midwives, nurses, physiotherapists and para-medical personnel (CPC 93191)
Insert new commitments as follows:
Mode 1: None.
Mode 2: None.
Mode 3: None.

ANNEX C.

THEORETICAL MODEL AND EMPIRICAL ANALYSIS ON MEASURING THE IMPACT OF FURTHER LIBERALIZATION ON THE HUMAN DEVELOPMENT INDEX

Theoretical framework

Drawing on the development economics literature, a country's HDI is defined by UNDP (2018) as a statistic composite index of health, education, and per capita income indicators. Hence, the factors determining HDI can logically be proxied by many factors, including the country's two basic production sectors, namely agricultural value added and manufacturing value added, two social services affecting human development, namely education and health services trade, and the impact of existing liberalization policy measures on these two social services trade. Drawing from the stochastic production frontier literature (Kalirajan and Shand, 1994), let the theoretical model be specified as follows:

$$ln\ X_{it} = ln\ f(Z_i;\beta)\ exp(v_i - u_i) \qquad (1)$$

where the term X_{ij} represents the actually achieved HDI of country i in period t. The term $f\ (Zi;\beta)$ is a function of the determinants of potential HDI and β is a vector of unknown parameters. The double-sided error term v_i, which is usually assumed to be $N(0, \sigma^2_v)$, captures the influence on HDI on the other left out variables, including measurement errors that are randomly distributed across observations in the sample. The single-sided error term, u_i is the combined effect of the "behind the border constraints", on which the researcher does not have full information. Those constraints emanate from the socio-political institutional rigidities of the concerned country i, and are understood to create the difference between the actual and potential HDI of country i. It is assumed that u takes values between 0 and 1 and it is usually assumed to follow a truncated (at 0) normal distribution, $N\ (\mu, \sigma^2_u)$ with mean μ and variance σ^2_u. When u takes the value 0, this means that the influence of the "behind the border constraints" is not important and the actual HDI and the potential HDI are the same, assuming there are no statistical errors $[ln\ Xij = ln\ f(Zi;\beta)]$. When u takes the value other than 0 (but less than or equal to 1), this means that the influence of the "behind the border constraints" is important and it constrains the actual HDI from reaching its potential. Thus, the term u_i, which is country-specific, represents the influence of the "behind the border constraints" and is a function of the socio-political institutional rigidities that are within the concerned country i. Thus, unlike the conventional approach, the suggested method of estimating the determinants of the HDI model does not exclude the country-specific influence of the existing "behind the border constraints".

Further it is assumed that the effects of country-specific constraints "u" are time-varying and follow an exponential specification:

$$u_{it} = \eta_{it} u_i = \left\{\exp\left[-\eta(\text{t-T})\right]\right\} u_i, \quad \text{t} \in \Im(i); i = 1,2,...\text{N} \qquad (2)$$

Here, η is an unknown parameter and determines whether the country-specific constraints u_{it}, which are the "behind the border constraints", decrease ($\eta>0$), remain constant ($\eta=0$) or increase with time ($\eta<0$). Maximum likelihood methods can be applied on the panel data to estimate the above discussed HDI model and to verify how important the socio-political institutional rigidities are in constraining the HDI reaching its potential level in ASEAN.

Empirically, the potential HDI is determined by the upper limit of the current data set. That is, by those economies that have effectively liberalized the healthcare services by reducing the "behind the border constraints" the most. Thus, potential HDI can be defined as the maximum level of HDI given the current level of the determinants of HDI and (given) the least level of the "behind the border constraints" within the data set. Finally, the suggested method bears strong theoretical and healthcare policy implications towards finding ways to eliminate the influence of the socio-political institutional rigidities to achieve the objectives of the AEC Blueprint 2025.

Data

The empirical analysis in this chapter has utilized the data from the OECD's IO table, trade data from the WTO, economic indicators data from the World Bank, and expenditure data on education from UNESCO for 2005–2015. In the empirical analyses for estimating the impact of liberalization on health, the data from the IO table was used, which provided trade data in education and the health sector specifically and in a long time series. Unlike in the case of other trade data sources, the data from the IO table arguably presents the best country-specific uniform trade data in education and health sectors. All the monetary variables were deflated by the GDP deflator at 2010 as the base year. Using the IO table also has limitations, such as the lack of uniform data for some countries, such as Lao PDR and Myanmar, and there are no updated data for the countries beyond 2015. The HDI is taken from the UNDP reports over the sample periods. The scores for the three HDI dimensions of health, education, and per capita income indicators are aggregated into a composite index using the geometric mean.

Agriculture, forestry, and fishing, value added (constant 2010 US$) (from OECD): Agriculture corresponds to the International Standard Industrial Classification (ISIC) divisions 1–5 and includes forestry, hunting, and fishing, as well as the cultivation of crops and livestock production. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by ISIC, revision 3 or 4. Data are in constant 2010 US dollars.

Manufacturing, value added (constant 2010 US$) (from OECD): Manufacturing refers to industries belonging to ISIC divisions 15–37. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. The origin of value added is determined by the ISIC, revision 3. Data are expressed in constant 2010 US dollars.

The empirical models used to measure the impact of further liberalization on education and healthcare services on HDI of ASEAN are as follows:

$$\begin{aligned} Log\ HDI_{it} = {} & \alpha_0 + \alpha_1\, Trade\ in\ education_{it} + \alpha_2\, Trade\ in\ healthcare_{it} + \\ & \alpha_3\, policy\ impact\ on\ trade\ in\ education_{it} + \\ & \alpha_4\, policy\ impact\ on\ trade\ in\ healthcare_{it} + \\ & \alpha_5\, Log\ agriculture\ value\ added_{it} + \alpha_6\, Log\ manufacturing\ value\ added_{it} + \\ & \alpha_7\, t + v_{ith} - u_{it} \qquad (4) \end{aligned}$$

$$u_{it} = \eta_{it} u_i = \left\{ \exp\left[-\eta(t-T) \right] \right\} u_i, \quad t \in \Im(i); i = 1,2,\ldots N \qquad (5)$$

The variables are self-explanatory except for the variables "policy impact on trade in education", and "policy impact on trade in healthcare". The liberalization of education and healthcare policies is gradual. Hence, the policy impacts on education and healthcare are modelled by multiplying the

time trend (1 for 2005 and 11 for 2015) with the trade in education and trade in healthcare. The computer software, FRONTIER 4.1 was used to estimate the equations (4) and (5) in a panel data framework (Coelli, 1996).

Discussion of the empirical results

The results of the estimation of equations (4) and (5) are presented in table 1. At the outset, it is important to examine whether the modelling of equations (4) and (5) in the stochastic production frontier framework is valid for the current data set used in the empirical analysis. Such an examination can be done by examining the statistical significance of the parameter estimate of gamma (γ). The parameter γ, is the ratio of country-specific variation (σ_u^2) to total variation ($\sigma_u^2/\sigma_u^2+\sigma_v^2$), which indicates whether the "behind the border constraints" are one of the determinants of HDI. When γ is significant, it implies that the "behind the border constraints" are important determinants of HDI. The results of table 1 concerning the estimates of γ indicate that the stochastic frontier modelling framework for the current data set is correct. The results mean that the influence of the "behind the border constraints" in determining the HDI cannot be ignored. The mean of the potential HDI is 0.82. The implication of the results is that the impact of the liberalization of healthcare services on the economy is not as expected and could be improved by 18% by eliminating the country-specific socio-political institutional rigidities. The constraints emanating from country-specific socio-political institutional rigidities on the economy may change over time due to both bilateral and multilateral negotiations and regional cooperation agreements, such as the AEC Blueprint 2025. Whether such changes happened during the study period of 2005–2015 can be examined by statistically testing the coefficient of *eta* (η). The *eta* coefficient indicates whether the constraining impact of country-specific socio-political institutional rigidities on reaching the potential HDI have been increasing from one time period to another. If the *eta* coefficient were positive, then the constraining impact of country-specific effects on achieving the potential HDI would be decreasing over time. If, however *eta* were zero or not significant, then the impact could be considered to be constant over time. The results in table 1 show that the *eta* coefficient is positive and significant. These imply that the impact of the liberalization policies of healthcare services on HDI and thereby on the ASEAN economy has positively improved between 2005 and 2015.[9]

The estimates of interest are the coefficients of the variables – "policy impact on trade in education" and "policy impact on trade in health" in table 1, which are significant at the 1% level. These results imply that the further liberalization of education and healthcare services has the potential to contribute to a significant improvement to HDI and thereby to the economy. Identification of such socio-political institutional rigidities at the individual country level is crucial and is difficult too with the existing data set. Further research in this direction is important from the liberalization policy perspective.

[9] This process is still continuing. As of 2019, the negotiations under the ASEAN Framework Agreement on Services (AFAS) have led to the ratification of the tenth packages of services commitments, and ASEAN has shifted to negotiations under ATISA.

Table 1. The impact of liberalization policies of health services on HDI

Y= log HDI	
log_trade in_education	0.02** (0.01)
log_trade in_health services	0.02** (0.01)
Time	0.002** (0.0009)
Log agriculture value added	0.04*** (0.007)
Log manufacturing value added	0.05*** (0.01)
policy impact on trade in education	0.02*** (0.007)
policy impact on trade in health	0.03*** (0.005)
_constant	-0.27 (0.24)
/mu (μ)	-0.25 (1.18)
/eta (n)	0.03*** (0.0045)
Gamma (γ)	0.83*** (0.232)
Number of countries	8
Number of time	11
Total Observations	88

Source: AJC.
Note: ** and *** refer to statistical significance levels of 5% and 1%, respectively.

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