BUILDING TRADE INTEGRATION DYNAMICS IN THE INDIAN OCEAN RIM ASSOCIATION: A TECHNICAL ANALYSIS

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This report was prepared for the Department of Foreign Affairs and Trade and the views expressed in this report are those only of its authors and do not represent the view of the Australian Government.

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ASEAN	Association of Southeast Asian Nations
DFAT	Department of Foreign Affairs and Trade
EU	European Union
FDI	Foreign Direct Investment
GVCs	Global Value Chains
IORA	Indian Ocean Rim Association
LDCs	Least Developed Countries
NAFTA	North American Free Trade Agreement
NTBs	Non-tariff Barriers
NTMs	Non-tariff Measures
PTA	Preferential Trade Agreement
RCEP	Regional Comprehensive Economic Partnership
UNCTAD	United Nations Conference on Trade and Development

1. INTRODUCTION

This technical report, prepared for the Australian Government Department of Foreign Affairs and Trade (DFAT), examines the evolution of trade, investment and regional integration amongst Indian Ocean Rim Association (IORA) member states since 1997 and makes observations about how to enhance intra-regional trade to support ongoing discussions in this regard.

Section 2 briefly describes the methodologies used in the technical analysis, encompassing data sources and techniques. It also sets out a few caveats regarding the availability of key data, as well as limitations of certain data sets.

Section 3 anchors the trade and investment analysis in a high-level overview of IORA members' economic propositions. This builds on previous assessments, as indicated in the corresponding text. Two levels of supplementary analysis are provided: aggregate IORA members' data set against a reference group of countries and regions including IORA dialogue partners; and a brief review of economic performance and structural change within IORA members.

Section 4 discusses IORA members' trade performance, starting with a comparison of their trade performance over the past two decades with comparator regions, for both goods and services. It then analyses the current trade structure of IORA members disaggregated by trading partners, product categories, and individual IORA member. The section concludes with an analysis of trade flows among sub-regions within the IORA membership.

Section 5 changes focus from trade in final goods to trade in parts and components through the prism of GVC participation. It considers the degree to which IORA members collectively, and individually, are engaging in GVCs. Then the intensity of trade in parts and components, and countries from which these products are sourced, is mapped in order to judge how far IORA members have maximised the developmental advantages to be gained from GVCs.

Section 6 explores investment flows into and from IORA members, in comparative perspective.

The main findings were summarised in the opening section, and select recommendations were offered.

2. METHODOLOGY

The review, analysis and recommendations submitted in this report were derived from desktop quantitative and qualitative research including:

- Review of relevant literature relating to the economic and trade aspects of the IORA, to gain a better understanding of the underlying issues in these two areas.

- Analysis of relevant international economics, trade and development databases to provide additional insights and present key trends for IORA members.

2.1. KEY FINDINGS FROM PRIOR REPORTS

The burgeoning popularity of strategic research concerning the Indian Ocean reflects the region's geopolitical relevance and importance for major powers' global rivalries especially in the context of maritime trading and communications routes, geopolitical dominance and natural resources. We did not identify many trade-related studies, as compared to those in international relations and strategic studies.

Nonetheless, in relation to building an IORA trade strategy we did identify and review eight studies (see Annex 2: Literature Review). Our key findings are:

- Most studies are descriptive. They conduct trend and growth analysis for both individual countries and the IORA region as a whole using trade and investment statistics. They provide useful illustrations of the region's trade and investment trends within recent timeframes. For example, Attri (2017) covers the 1997-2003 and 2005-2015 periods while Wignaraja, Collins and Kannangara (2018) cover the 2000-2017 period.

- These analyses were conducted for total trade and intra-regional trade at all industry aggregate values. There is a lack of discussion of key export/import industries for the region and trade connectivity within sub-regions of IORA. Wignaraja, Collins and Kannangara (2018), grouped IORA countries into three main sub-groups: South Asia; Africa and the Middle East; and Asia and the Pacific, and attribute sub-regional dynamics to the whole sub-group. They also highlight the state of connectivity within the IORA region using UNCTAD's Maritime Transport Database to portray container traffic as well as the Global Competitiveness Index and the World Bank's Logistic Performance Index to compare the quality of port infrastructure among IORA members. However, they include eight countries that are not members of IORA limiting the utility of their analysis as a reference point for IORA trade analysis.

- Two papers use general equilibrium modelling to assess the impacts of trade liberalisation. Anderson (2002) examines how reduction in barriers to trade in agriculture and clothing could affect IORA developing members and found countries from South and Southeast Asia could gain more than Sub-Saharan Africa. Rahman et al. (2014) assess the impacts of a potential preferential trade agreement (PTA) on IORA members covering economic welfare, total output and exports, finding that liberalisation through tariff cuts would produce significant welfare gains for all IORA members except Madagascar. The major drawback of these empirical studies relates to limited coverage of countries and unrealistic assumptions.

Overall, in our assessment the following research gaps were apparent:

- **Trade structure:** Although all studies examine trade performance of IORA countries over a reasonable timeframe, there is little discussion of trade dynamics among sub-regions in IORA. Section 4 aims to address this gap, including a discussion of trade in services.

- **State of connectivity:** Establishing the extent and trend of connectivity is vital to understanding the nature of trade integration amongst IORA members. However, connectivity within IORA attracted little attention among scholarly researchers. There are some useful databases that could be used to portray the state of connectivity within the region. UNCTAD's Maritime Transport Database can provide insight into container traffic, while the Logistics Performance Index can provide insight on the quality of infrastructure for the region in relation to other regions. Furthermore, the Liner Shipping Bilateral Connectivity Index (LSBCI) can map bilateral connectivity among IORA members. We will focus on this issue in the second substantive report, which will be addressed to the IORA Business Forum.

- **Regional integration in IORA**: None of the existing literature discusses the progress of IORA integration using meaningful indicators. Our aim is to measure the degree of regional cooperation and integration in IORA in relation to other key regions, which is explored in Section 4.

- **Trade in value-added:** None of the existing literature considers value-added trade within IORA members. While GVCs have proliferated to become the key feature of global trade, the scarcity of research on value chains within IORA reflects the region's low representation in the global trend. However, many countries within IORA are successfully engaged in GVCs. Accordingly, in Section 5 we explore value-added trade amongst IORA members using alternative databases.

2.2. DEFINING SUB-REGIONS, AND DATA MANAGEMENT

Given the vast geographic scale of IORA's constituent members, and lack of a discernible IORA 'region'[1], it is important to explain at the outset the classifications of region and research methodology we use. IORA comprises 22 member states, which we disaggregate further into four sub-regions: Oceania (Australia), Southeast Asia (Indonesia, Malaysia, Singapore, Thailand), South Asia (Bangladesh, India, Maldives, Sri Lanka), Middle East (Iran, Oman, United Arab Emirates, Yemen), and Africa (Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa and Tanzania).

Other key regions and country groups that are important for our comparative analysis owing to their respective contributions to Australia's global trade and investment footprint include East and Southeast Asia, the European Union[2], North America and IORA dialogue partners. A list of countries in these regions/groups is provided in Table A in Annex 1: Tables.

Other issues pertaining to the databases used are discussed in the corresponding text in which the data is analysed.

3. THE ECONOMIC PROPOSITION OF THE INDIAN OCEAN RIM ASSOCIATION (IORA) FOR AUSTRALIA

Relatively little analysis of IORA's economic proposition for Australia has been conducted to date. In this section, we first set out key insights from two prior reports, then supplement this with our own technical analysis in Section 3.2, which places IORA aggregate economic performance in broader comparative perspective, before highlighting key intra-IORA economic performance metrics in section 3.3.

3.1. INSIGHTS FROM PRIOR REPORTS

Attri (2017) conducted a detailed country level economic analysis over the 1990-2014 period, with the aim of evaluating IORA members' economic trend convergence since its establishment. The analysis illustrates that while some advanced member states (see Section 3.3 for a breakdown) economic performance declined after the global financial crisis, real Gross Domestic Product (GDP) growth was higher in Indonesia, Malaysia, Singapore, Thailand and India especially during 2012-2015, potentially generating more employment and industrialisation. Overall, the analysis shows that IORA members remain diverse in most economic indicators, reflecting the different levels of economic development across the 'region'. In addition, Attri (2017) underlines the crucial role of demographic dynamics in affecting sustainable development in IORA. Although the average annual population growth was less than 1 per cent in Mauritius, Thailand and Sri Lanka during 2012-2014, there was significant population growth in other IORA states during the sample period (1990-2014). Similarly, in many developing members (such as Kenya, Madagascar, Mauritius, Mozambique, Oman, Somalia, and Tanzania) growth in the agricultural labour force

was higher than other sectors. Combined with high population growth rates this suggests significant scope for urbanisation and market expansion. The labour force registered higher growth in services and manufacturing sectors than agriculture in India, Indonesia, Iran, Malaysia, South Africa, and Singapore which Attri (2017) ascribes to a shift into more productive jobs in these countries.

Australian Chamber of Commerce & Industry and Euromonitor (2019) provides recent (mainly 2017) and forecasted (2030) values of several different economic indicators in IORA to identify economic potentials among member states. Generally the historical figures support Attri's (2017) finding that economic performance of the member states is mostly uneven. Similarly, the forecasts show, for example, that many of the member states could experience positive economic growth in the coming decades, including some that currently have negative or slow growth rates. In addition, the growth of household income is projected to be positive in most members and to grow significantly in India, Indonesia and Bangladesh, implying higher saving and consumption in these IORA states, which is conducive to growth in trade and investment. Regarding consumer expenditure in IORA members, India, Indonesia and Australia are forecast to register the strongest growth followed by South Africa, Malaysia, Thailand, UAE, Kenya, Singapore and Iran, which are projected to experience moderate consumption expenditure growth. The remaining members are projected to continue experiencing lower consumption expenditure growth.

[1] The Australian Senate (2013, pp. 9-10) identifies nine sub-regions (36 countries) constituting the Indian Ocean 'Region' and sub-systems; 10 (55 countries) if respective hinterland countries are included, with the tenth sub-system being Central Asia. In Kaplan (2010), US Defence strategist and journalist Robert Kaplan focuses on all countries bordering the Arabian Sea and Bay of Bengal as comprising a coherent, emerging, strategic space from a naval strategy viewpoint. By contrast, IORA comprises 22 member states on the Indian Ocean Rim, and does not include some important states notably Pakistan and Myanmar.
[2] We removed IORA's European Dialogue Partners (the United Kingdom, France; Germany, and Italy) from the EU data since we analyse the Dialogue Partners as a separate 'group'.

[2] In particular, he analysed the trend of electric power consumption, total foreign exchange reserves, real GDP, GDP growth rates, gross savings (per cent of GDP), money and quasi-money (per cent of GDP), currency exchange rates, consumer price index, import and export for all member nations.

[3] He notes that population growth may affect economic growth and development of a given country by influencing production, consumption, income distribution, social protection, employment, migration, urbanisation and access to health, education, housing, water, food and energy. On the other hand, if equitable and non-discriminatory policies are adopted, population growth may create opportunities that are conducive for local and national economic development.

Australian Chamber of Commerce & Industry and Euromonitor (2019) also presents ease of doing business statistics across IORA members between 2013 and 2019. Singapore and Australia were found to be ideal nations in terms of ease of doing business with, the trend remaining unchanged overtime. Kenya, India and Indonesia show encouraging growth in their ease of doing business ranking, while Bangladesh and South Africa registered a decline in their performance. Australian Chamber of Commerce & Industry and Euromonitor (2019) concludes that increased trade and investment opportunities will be available for IORA if challenges related to infrastructure, energy demand, skills development, and human needs are addressed.

Regarding Australia's trade 'fit' with IORA, the country has generally strong comparative advantage in the export of a range of mineral resources, agricultural products, and services. Adams, Brown and Wickes (2013) explore Australia's export and import potential to the global economy. They identify Australia's major export items, especially since the turn of the 21st century, as iron ore, coal, gold, natural gas, crude petroleum, alumina, and copper ores and concentrates. They also show that Australia has robust comparative advantage in key services exports, including education, tourism and non-travel services exports (such as financial, legal, engineering and information services). Although its growth is less than mineral and service exports, manufactured goods export (such as cars, machinery, medicines, basic metals and chemicals) also registered strong growth in the first decade of the century. Prominent import items into the Australia economy include crude and refined petroleum, medicaments, clothing, and telecommunication equipment.

Against this background, the Australian Senate (2013) provides detailed analysis of the extent of economic opportunities available to Australia in the IORA members. According to the report, Australia's merchandise trade with IORA members was $78.7

billion in 2009, growing to $84.4 billion and $90 billion in 2010 and 2011, respectively. In terms of Australia's major export destinations, India was the leading IORA member country followed by Singapore, Thailand, Malaysia and Indonesia until 2013. The report predicted that India would be the world's second largest coal consumer after China by 2025. Hence, India's import of Australian metallurgical coal will grow significantly in the future. Australia is already exporting significant quantities of gold and copper to IORA member states, and the export of these and other mineral products to IORA member states is expected to increase owing to rapid growth in emerging states. They also identify growing demand for Australia's uranium in India, UAE, Malaysia, Bangladesh and Thailand. In general, the anticipated growth in industrial and economic development in IORA states is expected to increase resource consumption exponentially and provide export opportunities for Australia, particularly with regard to mineral and energy resources. The report also stresses the increasing role of the mining sector in many IORA member states, creating a growing demand for mining related services.

3.2. IORA IN COMPARATIVE ECONOMIC PERSPECTIVE

In this section, we analyse selected major economic indicators for IORA, East Asia and Pacific, EU, North American Free Trade Agreement (NAFTA), Latin America and Caribbean, and Least Developed Countries (LDCs). The last two groups enable analysis of comparative development experiences, while the first three constitute Australia's main trade and investment partners. The reported statistical figures allow us to weigh the economic potential of IORA for Australia compared to the other sub-regions. We focus mainly on economic indicators that may potentially influence the consumption of mineral resources, agricultural products, services (such as education and tourism) and certain manufactured goods that are immensely important for the Australian economy.
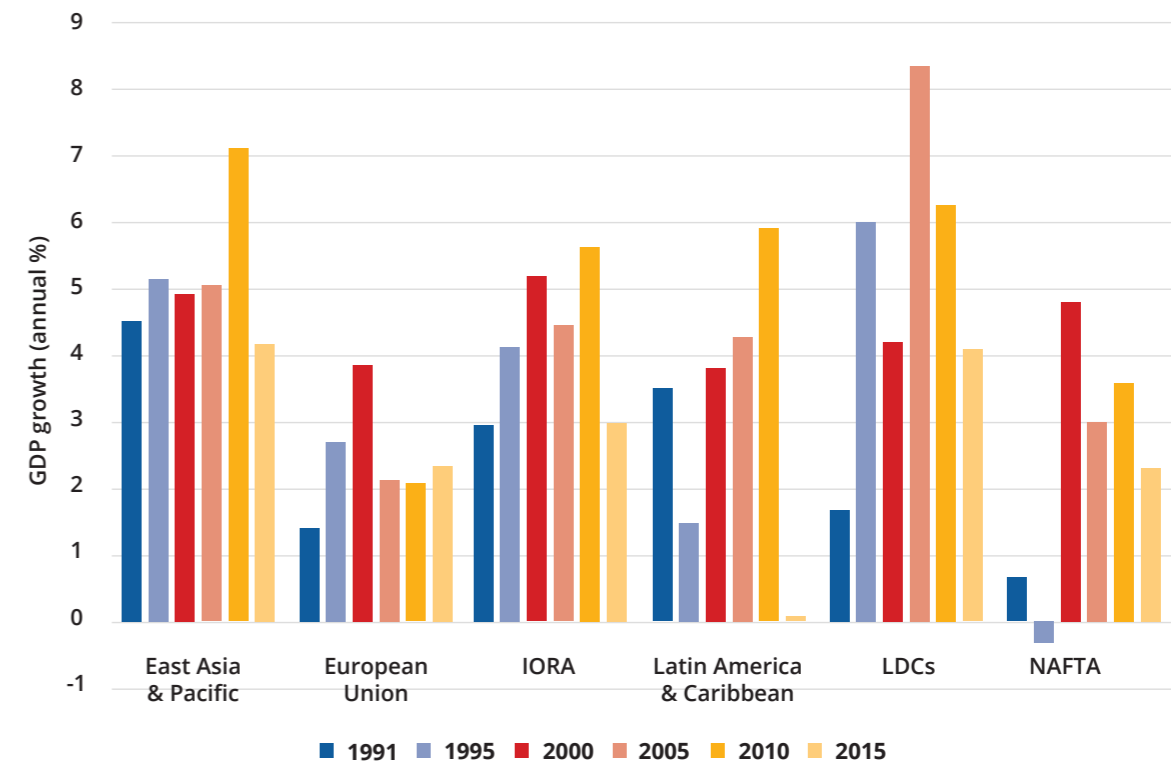
FIGURE 1: GDP GROWTH (ANNUAL %) ACROSS DIFFERENT GROUPS OF COUNTRIES

Source: Author's calculation based on the World Bank Indicators

In Section 3.3 the aggregate IORA figures are broken down to provide more nuance.

Figure 1 presents average economic growth of the IORA and other five regions for selected time intervals. IORA members experienced sustainable economic growth, although East Asia and LDCs generally experienced higher growth rates. This sustained economic growth illustrates the high economic potential of the IORA region for Australian businesses and consumers, and the potential to create new economic opportunities for Australia by raising export, import and investment in the region.

As an alternative indicator of aggregate consumption in an economy, we also plot government and private consumption expenditure for the different regions in Figure 2. Expectedly, the LDCs have the lowest

government expenditure suggesting their low market potential for the IORA member countries such as Australia. However, government expenditure is around 15 per cent for the sample period in IORA, which is almost equal with that of East Asia and Pacific, NAFTA, and Latin America and Caribbean.

Figure 2 presents the percentage of consumption expenditure for IORA, East Asia & Pacific and the NAFTA region. Compared to the East Asia & Pacific region, private consumption is significantly higher in IORA members, and the percentage of private consumption (to GDP) in IORA member states is nearly equal to the NAFTA region. In Annex Table B we provide the growth of per capita GDP as a proxy for private consumption expenditure in the region. While Comoros, Oman and UAE registered low per capita GDP growth over the years, other IORA member states have shown

FIGURE 2: FINAL GOVERNMENT AND CONSUMPTION EXPENDITURE (% OF GDP)

Source: Author's calculation based on the World Bank Indicators

FIGURE 3: AVERAGE ACCESS TO ELECTRICITY (% OF POPULATION)

Source: Author's calculation based on the World Bank Indicators

impressive growth suggesting higher consumption potential in the region. In particular, per capita GDP has grown at high rates in South and Southeast Asian member states notably Bangladesh, Indonesia, India, Malaysia, and Sri Lanka, but also Mozambique. Clearly the global financial crisis impacted on this pot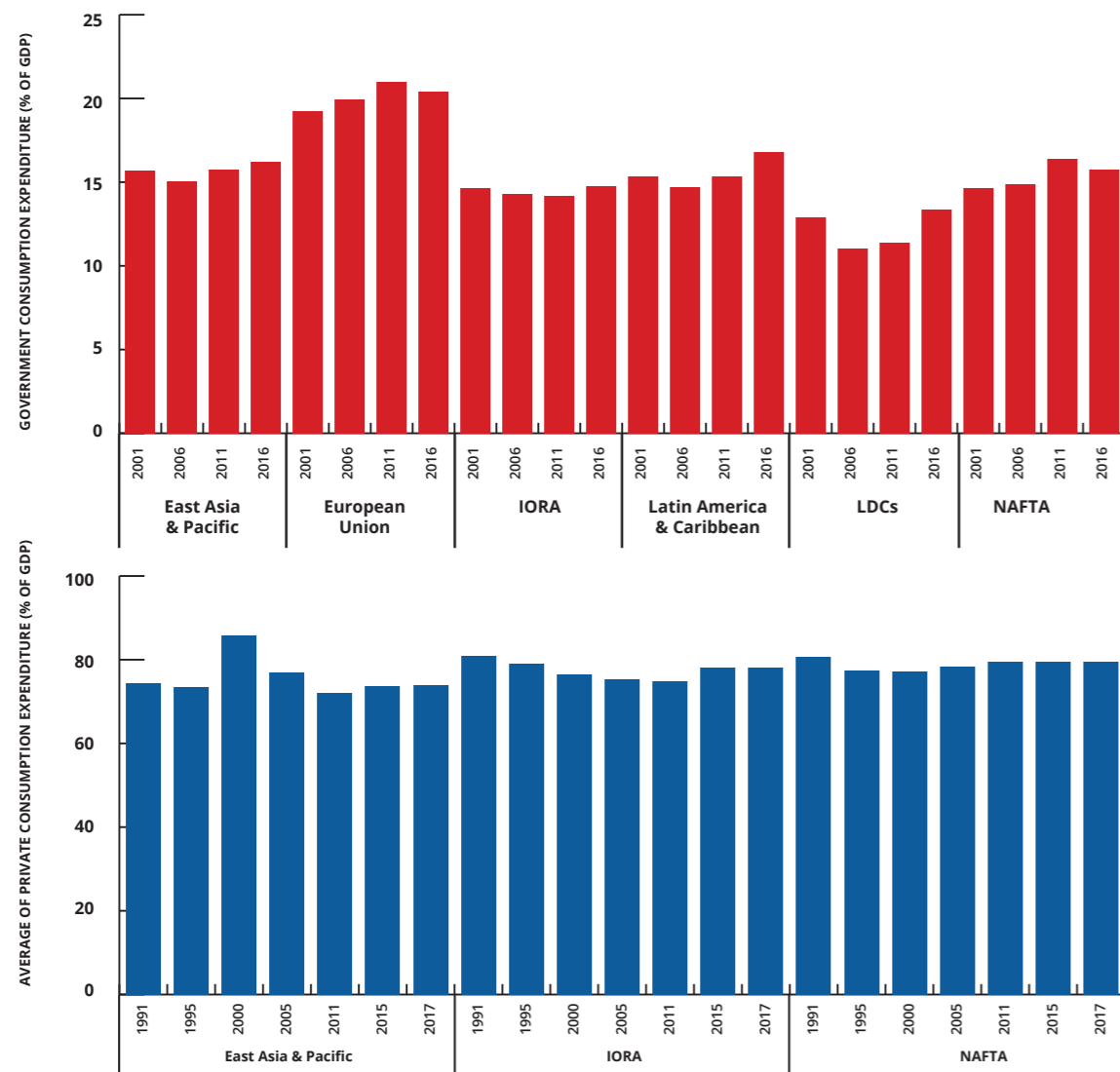ential, as it did on all parts of the global economy. But being home to nearly 2.7 billion people, propelled by relatively high GDP growth rates and demographic transitions (see Figure 5), consumption expenditure will continue to hold vital market potential for member states.

Infrastructure development is an essential input for economic integration. To compare the level of infrastructure growth across IORA with other regions, we provide figures on access to electricity between 1995 and 2015 in Figure 3. Almost 100 per cent of the population had access to electricity in the EU and NAFTA, reflecting the high degree of infrastructure development in these two regions. Similarly, East Asia and Pacific, and Latin America and Caribbean registered high levels of electricity infrastructure development over the sample period. While there is an improvement trend, LDCs registered by far the lowest electricity coverage in the world.

Electricity access across the IORA region showed larger growth over the sample period. In 1995 about 55 per cent of IORA states' populations had access to electricity, increasing to around 80 per cent by 2015. This encouraging infrastructure growth – read together with demographic transitions, consumption potential, and relatively high GDP growth – suggests an alternative outlet for Australian export products. Improved electricity infrastructure also implies a more enabling environment for business, which promotes foreign direct investment.

Figure 4 illustrates the distribution of labour employment in the agricultural, industrial and service sectors across the five regions between 1991 and 2015. Overall the employment structure among the three sectors in NAFTA and the EU look identical with the service sector accommodating the largest labour employment followed by industry and agriculture. In these two regions, the service sector employs more than 60 per cent of the labour force and the employment share has continued to increase over the past three decades. Contrarily, the share of labour employment in the agricultural and industrial sector has shrunk. In comparison to other regions, the structure of labour employment remains different for least developed

countries, whereas agriculture accounts for more than 60 per cent of the labour force, followed by the service and industrial sectors. The East Asia and Pacific, Latin America and Caribbean and the IORA regions have similar employment structures. Considering IORA more closely, the percentage of labour employment in the industrial sector remained constant at about 20 per cent over the sample period, while the share of service sector employment rose over time, from 40 per cent in 1995 to 50 per cent in 2015, and the share of agricultural employment declined over the past three decades from 40 per cent in 1995 to around 30 per cent in 2015.

Figure 5 provides the average gross domestic savings, percentage of working age population, and average inflation for selected time periods. Higher gross domestic saving reflects the availability of sufficient funds for domestic investment, which in turn enhances productivity and future living standards. Similarly, the presence of large working age populations suggests the availability of cheap labour for production purposes. The dynamics of inflation usually summarise the scale of economic policy uncertainty in a given country or region.
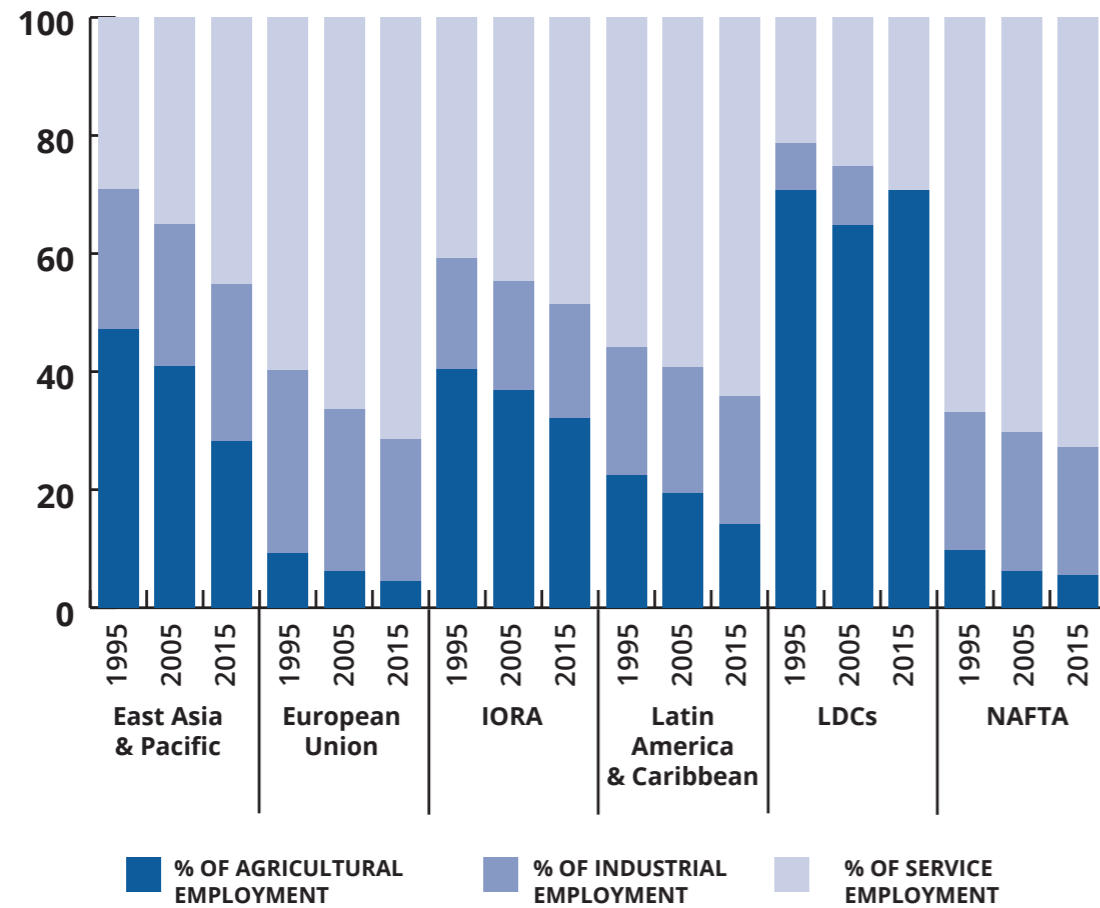
FIGURE 4: SECTORAL EMPLOYMENT (% OF TOTAL EMPLOYMENT)

Source: Author's calculation based on the World Bank Indicators

FIGURE 5: AVERAGE DOMESTIC SAVING, WORKING AGE POPULATION AND INFLATION (%)

Source: Author's calculation based on the World Bank Indicators

The last two figures explore the potential of IORA member states for the development of the tourism sector. Figure 6 presents the total number of tourist arrivals and departures in 2000, 2005, 2010 and 2015 in each region. The largest number of total international tourist arrivals and departures are recorded in the EU, followed by East Asia and the Pacific, NAFTA, IORA and Latin America and the Caribbean. The total number of tourist arrivals and tourist departures grew for regions across the sample points, with significant growth observed across IORA member states between 2010 and 2015.

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While they are uneven in other regions, average gross domestic savings and the percentage of average working age population continuously increased, and the average inflation rate declined in the IORA region. Generally, these statistics point to the existence of favourable investment environments in IORA member states. Unlike the other regions, increasing domestic savings and working age populations implies less costly labour input for both domestic and foreign direct investment. The declining inflation rate over the past three decades also suggests relatively stable macroeconomic policy environments, which are indispensable for foreign investors. As such, these incentives invite regional and global businesses to start considering IORA members as alternative global investment destinations. Subject, of course, to the unique situations of IORA sub-regions and individual member states.

FIGURE 6: TOTAL NUMBER OF TOURIST ARRIVALS AND DEPARTURES

Source: Author's calculation based on the World Bank Indicators

In addition, Figure 7 reports the total populations and tourism expenditure for each region. Large populations can create higher market potential. IORA contains a large population that can create higher market potential for Australian products and services. Furthermore, tourism expenditure grew substantially particularly between 2010 and 2015, indicating tourism potential of IORA member states including Australia.
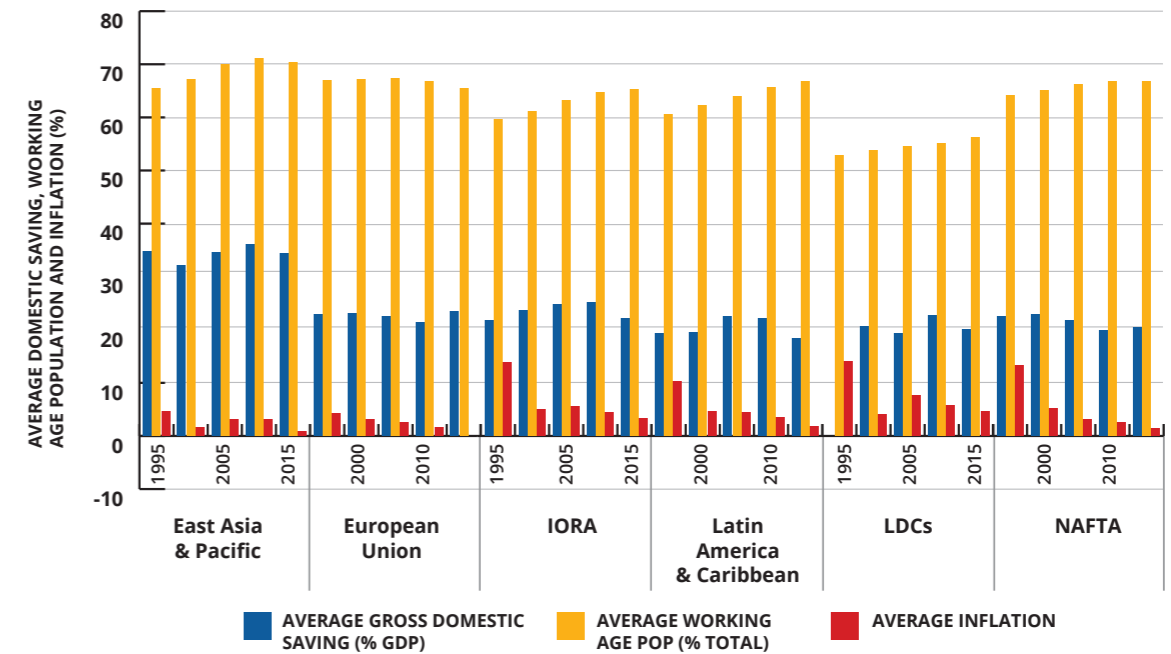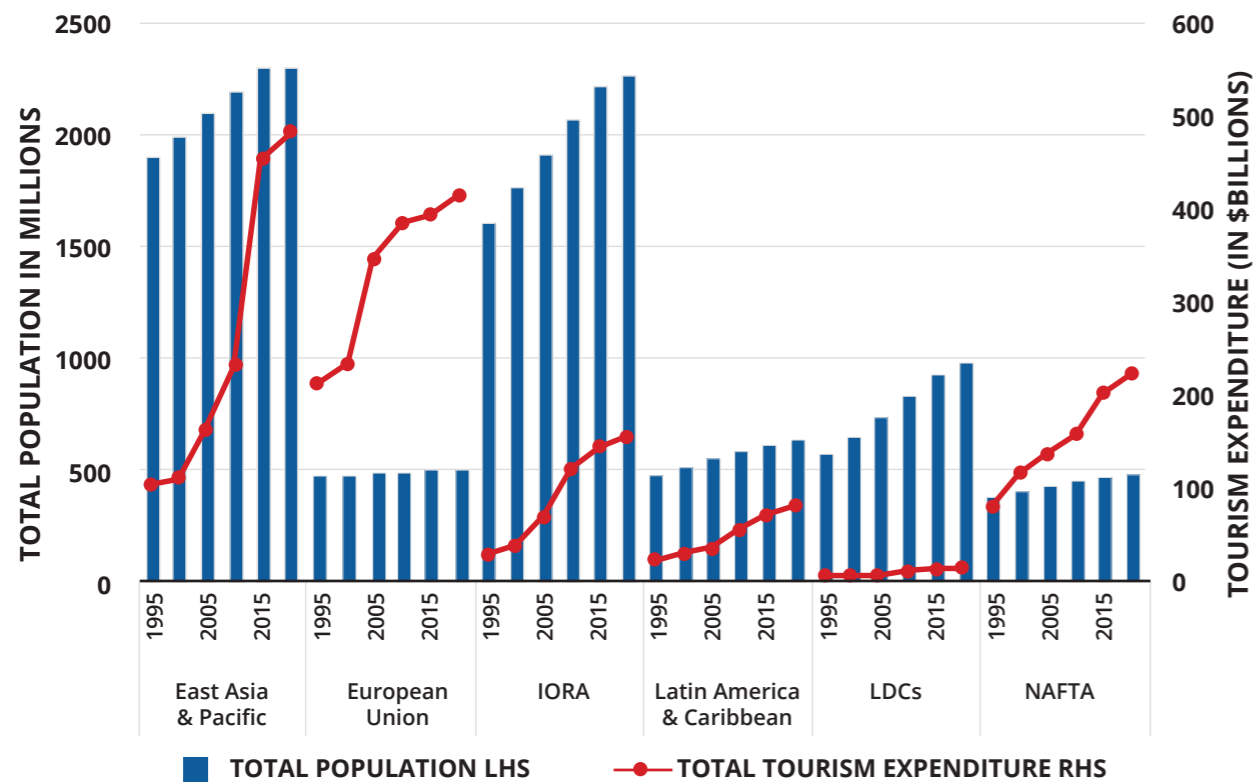

FIGURE 7: TOTAL POPULATION AND TOTAL TOURISM EXPENDITURE FOR EACH SUB-REGION

Source: Author's calculation based on the World Bank Indicators

▌3.3. KEY IORA ECONOMIC DATA

IORA is made up of a diverse group of countries spread over three continents and at different levels of development. According to the World Bank's classification of countries for 2019-2020 , the grouping consists of five high-income economies (Australia, Oman, Seychelles, Singapore, and UAE); six upper middle-income economies (Iran, Malaysia, Maldives, Mauritius, South Africa and Thailand); six lower middle-income economies (Bangladesh, India, Indonesia, Kenya, Sri Lanka and Yemen); and five low-income economies (Comoros, Madagascar, Mozambique, Somalia, and Tanzania).

In 2017, the Gross Domestic Product (GDP) (at 2010 constant US$) for the whole IORA region reached US$8.13 trillion . In Table C of Annex 1: Tables, we present the real GDP of IORA member states from 1996-2017, at three-year intervals. In 2017 India, Australia, and Indonesia were the three biggest economies. Between 1997 and 2017, average annual economic growth rates were above global annual growth rates, with the exception of 1998, the year the Asian financial crisis was at its apex. Additionally, IORA member states' average annual GDP growth rates peaked in 2006 at 6.8 per cent (Figure 8).

Table D (in Annex 1: Tables), presents the GDP growth rates of IORA member states between 1996 and 2017. The table illustrates that the above average global growth rate shown in Figure 8 is attributed to countries that recorded more than 5 per cent growth annually (particularly from 2005 onwards) notably Bangladesh, Indonesia, India, Kenya, Maldives, Mozambique, Malaysia, Sri Lanka and Tanzania. India's economic size and performance is a dominant feature.

Examining the evolution of IORA members' economic structure, measured by average gross value added per sector, during the period 1995 to 2015 shows that high income, high-middle income, and low-middle income IORA members experienced shifts to the services sector (Figure 9). For low-income countries, the shift from agriculture to industry is more pronounced. To explain the differences in the economic structures over time for the different IORA members, it would be worth looking at contributing factors such as the infrastructure gap, human capacity constraints and other influencing factors. However, such an analysis is beyond the scope of this study.

Figure 10 breaks down the year-on-year average GDP growth of IORA members for six smaller sub-regions[6] , and shows that GDP growth amongst IORA members is driven mainly by South East Asian (Indonesia and Malaysia), South Asian (India, Bangladesh and Sri Lanka), East African (Kenya, Tanzania and Mozambique), and Gulf states. GDP growth is relatively lower in Oceania (Australia) and Southern Africa.
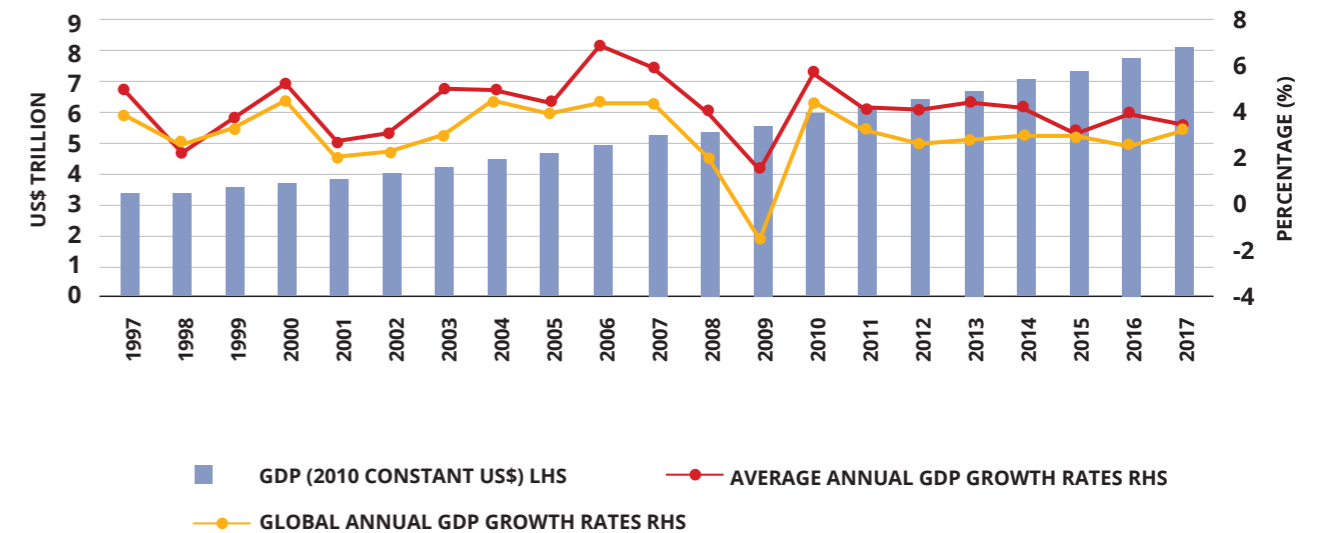
FIGURE 8: IORA GDP AND GROWTH RATES AND ANNUAL GLOBAL GROWTH RATES 1997 - 2017

Source: Author's calculation based on the World Bank Indicators

[6] The IORA sub-regions include (1) East Africa (Somalia, Seychelles, Kenya, Tanzania, and Comoros), (2) Southern Africa (Mozambique, Madagascar, Mauritius, and South Africa), (3) Oceania (Australia), (4) Gulf (Yemen, UAE, Oman, and Iran), (5) South Asia (Republic of Maldives, Sri Lanka, India, Bangladesh) and (6) South East Asia (Thailand, Malaysia, Singapore, Indonesia).

HIGH INCOME

	1995	2005	2015
Services	62.6	58.9	66.8
Industry	34.6	39.1	31.7
Agriculture	2.8	1.9	1.5

HIGH - MIDDLE INCOME

	1995	2005	2015
Services	58.9	59.3	63.6
Industry	31.9	33.9	28.6
Agriculture	9.2	6.8	6.7

LOW - MIDDLE INCOME

	1995	2005	2015
Services	49.2	51.2	54.6
Industry	29.3	33.3	27.8
Agriculture	21.6	15.5	17.6

LOW INCOME

	1995	2005	2015
Services	48.8	48.7	49.1
Industry	12.0	14.4	16.0
Agriculture	39.2	36.9	34.9

■ AGRICULTURE ■ INDUSTRY ■ SERVICES

FIGURE 9: AVERAGE GROSS ADDED VALUE BY ECONOMIC ACTIVITY IN 1995, 2005 AND 2015

Source: Author's calculations based on statistics obtained from the United Nations Statistics Division (UNSD)
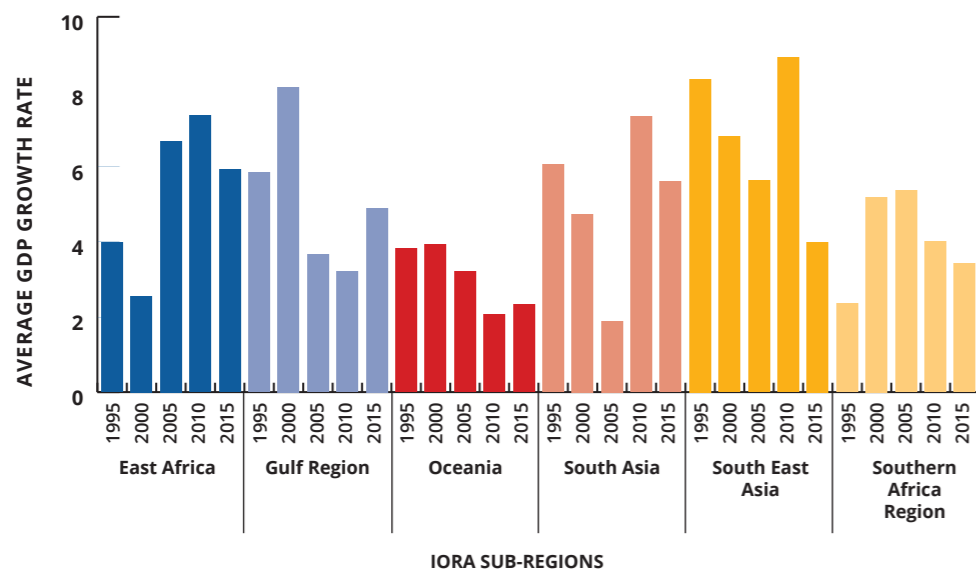
FIGURE 10: REGIONAL AVERAGE GDP GROWTH IN IORA

Source: Author's calculations based on data obtained from the World Development Indicators

4. TRADE PERFORMANCE AND INTEGRATION OF IORA MEMBER STATES

4.1. GOODS TRADE EVOLUTION

Since IORA's formal establishment in 1997, member states' total goods trade (being the sum of imports and exports) has almost quintupled, from US$806 billion to US$4,275 billion in 2018 (Figure 11), an increase of 10.9 per cent per year. Compared to other regions[7], IORA trade has grown as fast as East and Southeast Asia (10.9 per cent per year) but faster than the EU (7 per cent per year), and North America (6.3 per cent per year).

Overall, IORA's trade volume lags behind these other regions. In 2018, the value of IORA's total trade accounted for 11.7 per cent of world trade, compared to North America (15.8 per cent), East and Southeast Asia (23.3 per cent), and the EU (30.4 per cent). That said, absolute figures only tell part of the story regarding integration into global trade flows; of more consequence is a country's positioning within GVCs, which is explored in Section 5.
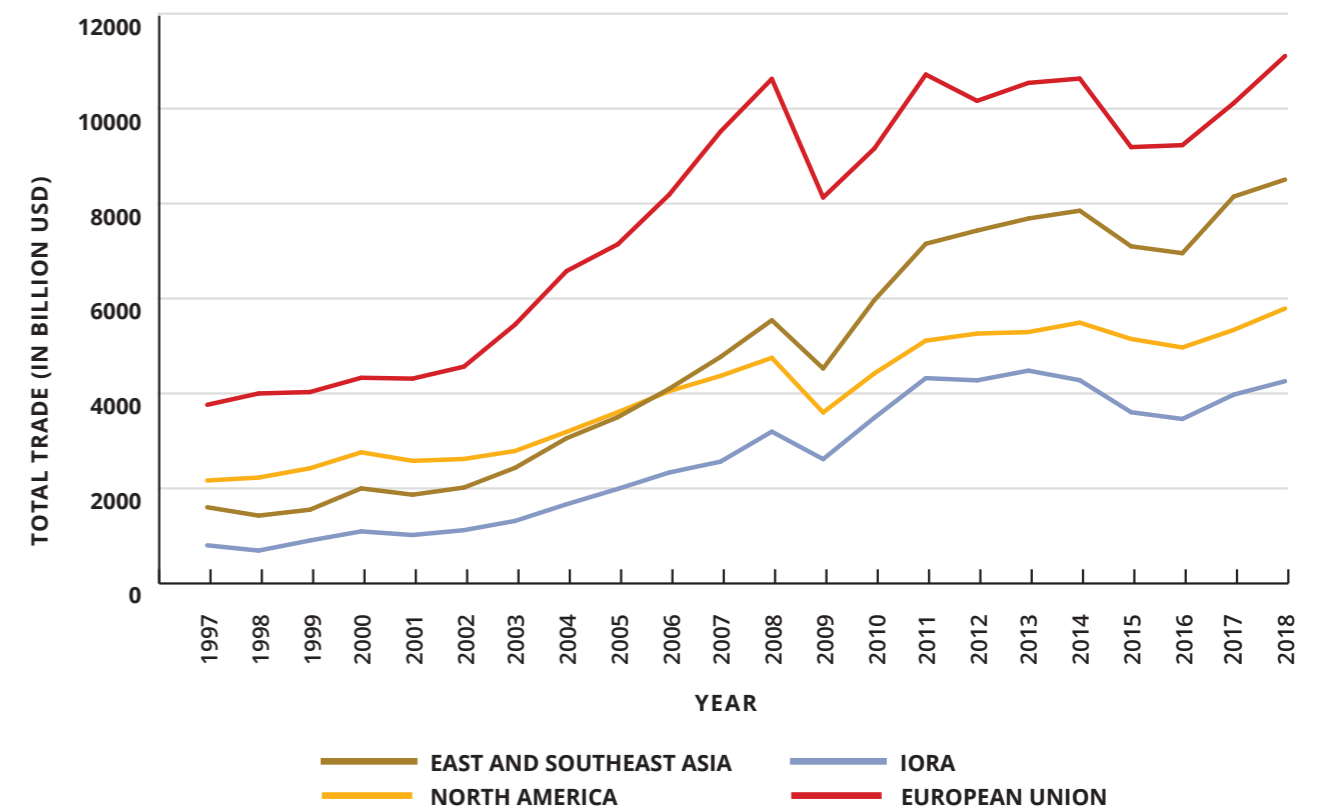
FIGURE 11: SELECTED REGIONS' TRADE, 1997-2018 (CURRENT PRICES)

Source: Author's calculation using trade statistics from UN Comtrade

[7] It is important to note that unlike conventional classifications, to avoid double counting our definition of East and Southeast Asia excludes four IORA members, namely Indonesia, Malaysia, Singapore and Thailand.

Trade exposure varies greatly among IORA members. Big economies with relatively wealthy markets such as Australia, and huge markets such as India and Indonesia, have relatively low trade to GDP ratios (at 42 per cent, 41 per cent, and 39 per cent, respectively). Others are more open, with trade to GDP ratios ranging from 317 per cent for Singapore to 172 per cent and 136 per cent for Mauritius and Malaysia, respectively.

Another striking disparity is business and investment climate across members. Countries like Singapore, Australia, UAE, Mauritius and Malaysia are ranked among the top countries in the world, with the most business-friendly regulations. The opposite is true for most economies in Africa and South Asia.

Combining these divergences with the economic disparities discussed in Section 3.3, the result is uneven trade performance among IORA members. Disaggregating total value of trade by country (Figure 12), it is evident that the region's trade is dominated by a small group of countries. India is the largest trading country in IORA with a 24.8 per cent share of total IORA trade, followed by Singapore (20.7 per cent), Thailand (13.2 per cent), Australia (12.9 per cent) and Malaysia (12.3 per cent). Trade from these five economies represents nearly 85 per cent of IORA members' total trade.

IORA members trade most with their dialogue partners[8], East and Southeast Asia, and other IORA members than with Europe (excluding dialogue partners) and North America (excluding Dialogue Partners) (Figure 13). IORA's dialogue partners comprised 37.8 per cent of exports and 43.9 per cent of imports. It is evidently primarily a China story (34.2 per cent of exports; 40 per cent of imports), with the US (23 per cent and 17.5 per cent respectively), and Japan (17.3 per cent and 14.2 per cent respectively) also important, and the four European states collectively accounting for 13.8 per cent and 18.9 per cent of IORA members' exports to and imports from dialogue partners, respectively (Table 1).

In 2018, 34 per cent of IORA members' exports went to the East and Southeast Asia region, 25 per cent was accounted for by intra-IORA exports, 5 per cent of exports were destined for the EU and 1 per cent to North America. The scale of imports from those regions shows similar features: 31.9 per cent of IORA members' imports came from East and Southeast Asia, 24 per cent were intra-IORA imports, 4.5 per cent from the EU and 1.2 per cent from North America.

FIGURE 12: INDIVIDUAL COUNTRY'S SHARE OF IORA TOTAL TRADE, 2018

Source: Author's calculation using trade statistics from UN Comtrade

FIGURE 13: SHARE OF IORA EXPORTS AND IMPORTS BY REGION, 2018

Source: Author's calculation using trade statistics from UN Comtrade
Note: * European Union excludes IORA dialogue partners, being France, Germany, Italy and the UK.
** North America comprises Canada and Mexico, the US being a dialogue partner.

[5] China, Egypt, France, Germany, Japan, Korea, Turkey, United Kingdom, and USA.

Table 1: IORA Members' Trade with Dialogue Partners

COUNTRY	EXPORTS		IMPORTS	
	Value *(in billion USD)*	Share	Value *(in billion USD)*	Share
China	399.3	41.4%	256.7	34.9%
United States	174.8	18.1%	171.7	23.3%
Japan	142.1	14.7%	133.0	18.1%
Korea, Rep.	78.7	8.2%	63.3	8.6%
Germany	77.0	8.0%	39.7	5.4%
United Kingdom	39.1	4.1%	32.1	4.4%
France	39.0	4.0%	17.5	2.4%
Turkey	9.9	1.0%	13.8	1.9%
Egypt, Arab Rep.	5.1	0.5%	7.4	1.0%
Total	**964.9**	**100.0%**	**735.2**	**100.0%**

Source: Author's calculation using trade statistics from UN Comtrade

The trade structure of IORA members is quite concentrated. About 39.3 per cent of exports to the world comprise machinery and electronic products, and fuels (Figure 14). These two product groups also represent about half of IORA members' imports. The other major traded product categories include chemicals, stone and glass, metals, transportation, plastics and rubber, vegetables, and minerals. This aggregate pattern of trade concentration is consistent with results from the widely used Herfindahl-Hirschmann Index (HHI) , which measures the degree of product concentration. The average product HHI of IORA members' economies stands at 0.31, compared to 0.09 for North America, 0.06 for the EU, 0.10 for Asia, which means that IORA members' trade structure is considerably concentrated and the degree of concentration is significantly higher than most of these other regions. While this aggregate figure conceals substantial variation at the member state level, it indicates that trade diversification strategies are an important matter for IORA members.
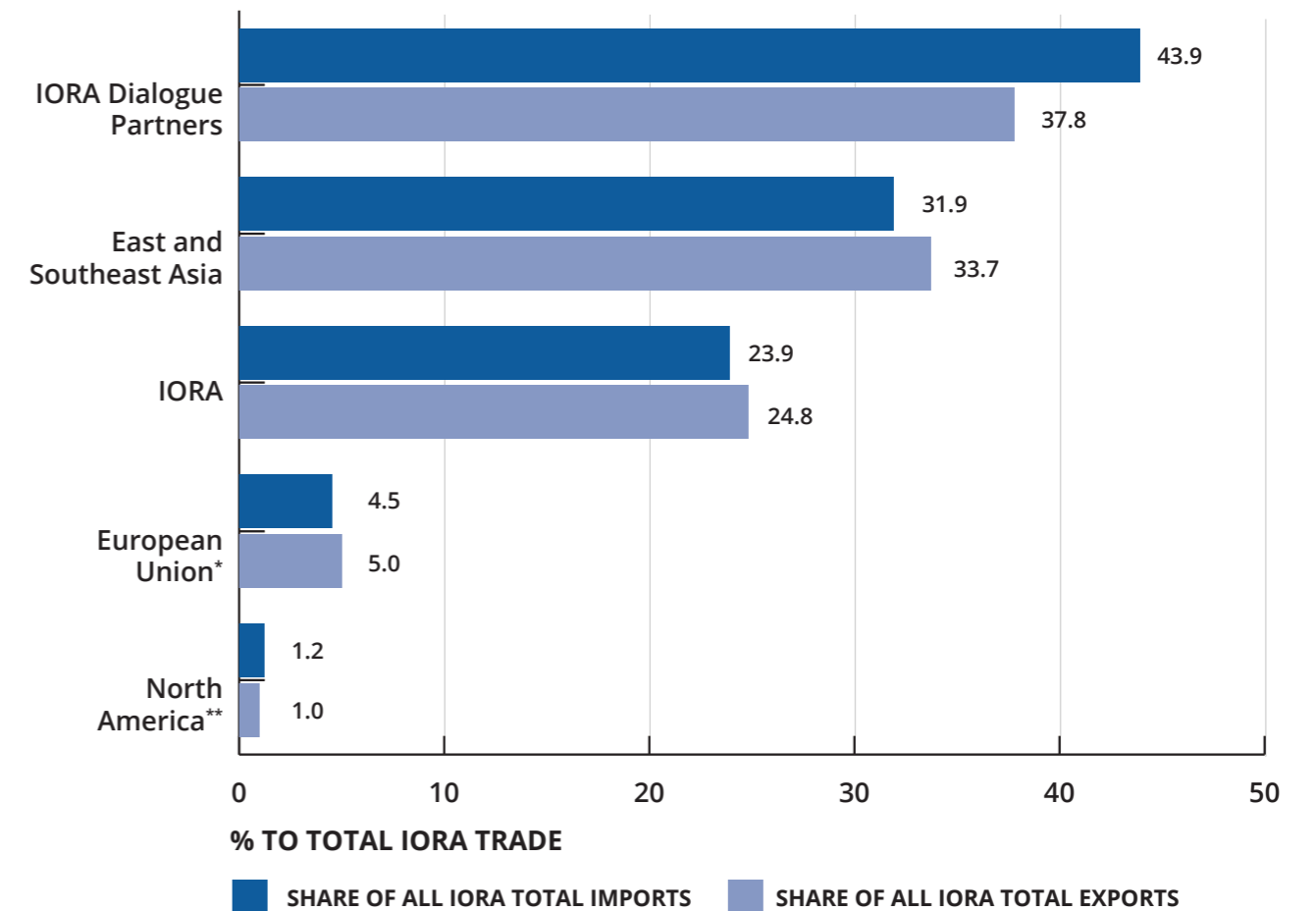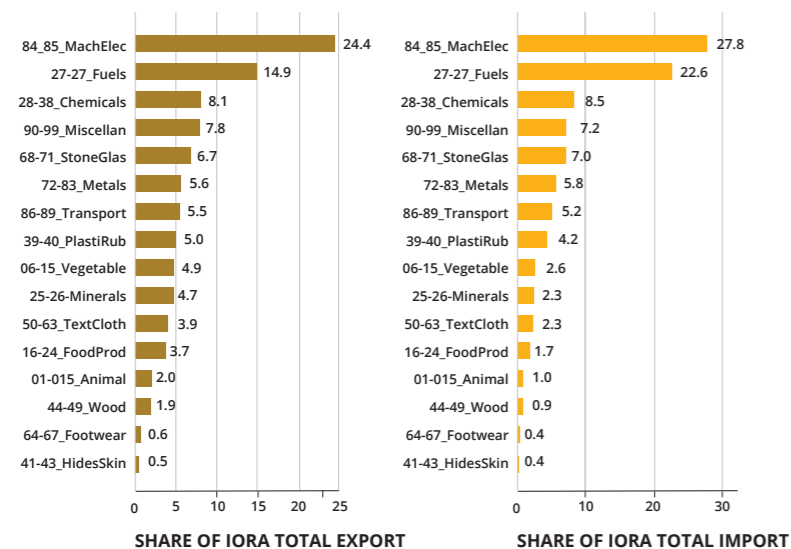

FIGURE 14: SHARE OF IORA EXPORTS AND IMPORTS BY PRODUCT CATEGORY, 2018

Source: Author's calculation using trade statistics from UN Comtrade

▌4.2. TRADE IN SERVICES

From the WTO's dataset on trade in services, statistics on exports and imports of services can be broken down by region, sector and partner countries. According to the sixth edition of the IMF Balance of Payments and International Investment Position Manual (BPM6), on which the dataset is based, national services comprises two broad components: commercial services, and government goods and services. Commercial services are sub-divided into goods-related services, transportation, travel and other commercial services (WTO n.d). Detailed sub-categories of services are provided in Annex 1: Tables. Table F.

Over the past 13 years, total services trade of IORA members has almost tripled, from US$493.8 billion in 2005 to US$1421.5 billion in 2018 (Figure 15) – an increase of approximately 8.5 per cent per year. Compared to other regions, IORA members' services trade has grown at a similar pace to East and Southeast Asia (8 per cent), and faster than the EU (5.2 percent) and North America (5.3 per cent). In terms of trade volume, IORA members lag behind these other regions. In 2018, the value of IORA members' total services trade accounted for 12.4 per cent of world services trade, compared to North America (14.5 per cent), East and Southeast Asia (15.5 per cent), and the EU (41.3 per cent).

Figure 15 provides services trade patterns for each region. During the 2005-2018 period, both the EU and North America ran services trade surpluses. Specifically, in 2018 total services exports were US$2544.8 billion for the EU and US$949.8 billion for North America; while in the same year the figure for services imports was US$2177.87 billion for the EU and US$709.3 billion for North America. The resulting services trade surpluses in 2018 were US$366.9 billion and US$240.6 billion, respectively. East and
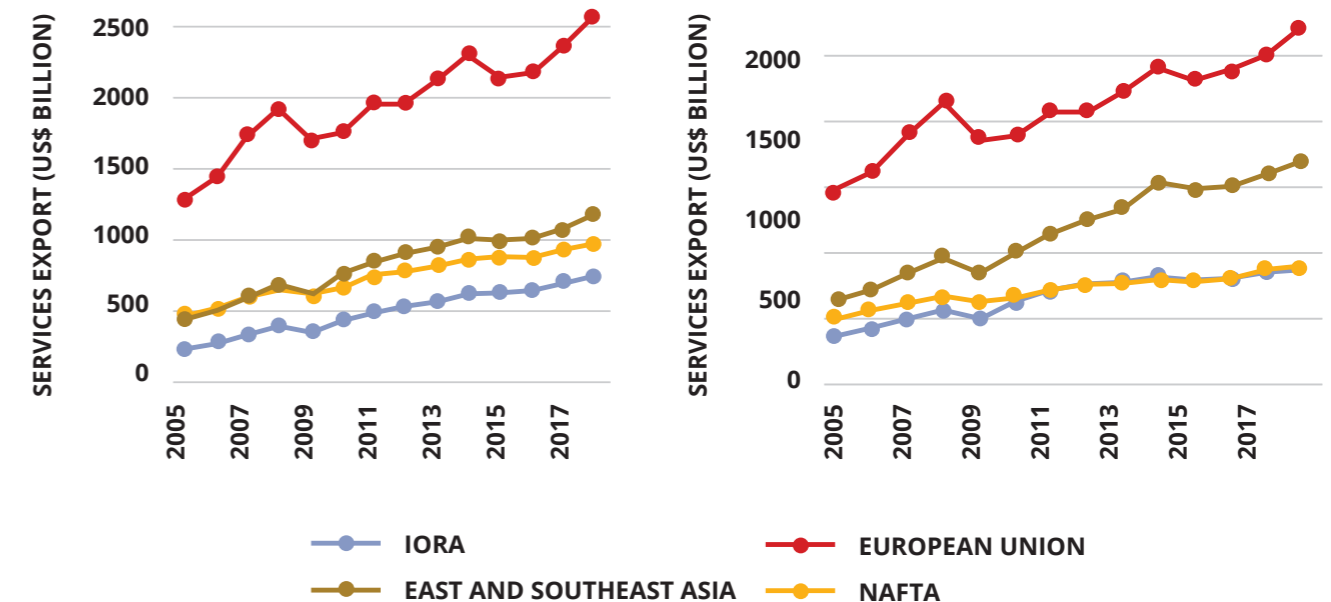
FIGURE 15: SELECTED REGIONS' SERVICE TRADE, 2005-2018

Source: Author's calculation using WTO's dataset on trade in commercial services

Southeast Asia are net services importers with services trade deficits amounting to US$52.3 billion in 2005, increasing fourfold to US$213.1 billion in 2018. More detailed services export and import statistics for all regions are provided in Table F in Annex 1: Tables.

One striking feature of IORA members' service trade is the notable change in trading status from services consumer to services provider. As with trade in goods, and as shown in Figure 16, IORA members were net importers of commercial services during the 2005-2015 period. In 2005, the region recorded US$62.3 billion of services trade deficit; the amount rose slightly to peak at US$78.7 billion in 2012 before it sharply declined

to US$ 14.3 billion in 2015. The year 2016 marks IORA members' new position as net services exporters in the aggregate, with the combined trade surplus at US$13.7 billion. The amount rose to US$25 billion in 2017 and further US$37 billion in 2018.

IORA members' services trade direction varies from goods trade in a number of ways. Firstly, intra-regional trade for commercial services is significantly lower than for trade in goods. In 2018, intra-IORA trade was 8.9 per cent for services exports, approximately 16 per cent lower than the ratio for goods exports. Similar differences are apparent for intra-IORA services imports and goods imports.

Breaking down into sub-categories, IORA members' services trade is concentrated on five sectors namely travel, transport, other business services, ITC services, and financial services. The sum of trade for the top five services represents about 84 per cent of the IORA region's total services trade. Travel services is the largest sector for the IORA region, with an absolute value of US$234.7 billion for export and of US$142.2 billion for import. Other business services is the second largest export sector with value of US$147.4 billion, followed by transport, ITC services, and financial services. Figure 17 also suggests that the IORA region is both a consumer and provider of major services categories.

Similar to trade in goods, IORA services trade is dominated by a small group of countries (Figure 18). India is the leading services export country with a 28 per cent share of total IORA services exports, followed by Singapore (25 per cent), Thailand (12 per cent), UAE (9.8 per cent) and Australia (9.5 per cent). For imports, Singapore is the largest services importer, followed by India, UAE, Australia and Thailand. Services import by these six economies represent nearly 81 per cent of IORA's total services imports.

FIGURE 16: : IORA MEMBERS' COMBINED SERVICES EXPORTS AND IMPORTS, 2005-2018

Source: Author's calculation using WTO's dataset on trade in commercial services

FIGURE 17: SHARE OF IORA EXPORTS AND IMPORTS BY SERVICE CATEGORY, 2018

Source: Author's calculation using WTO's dataset on trade in commercial services
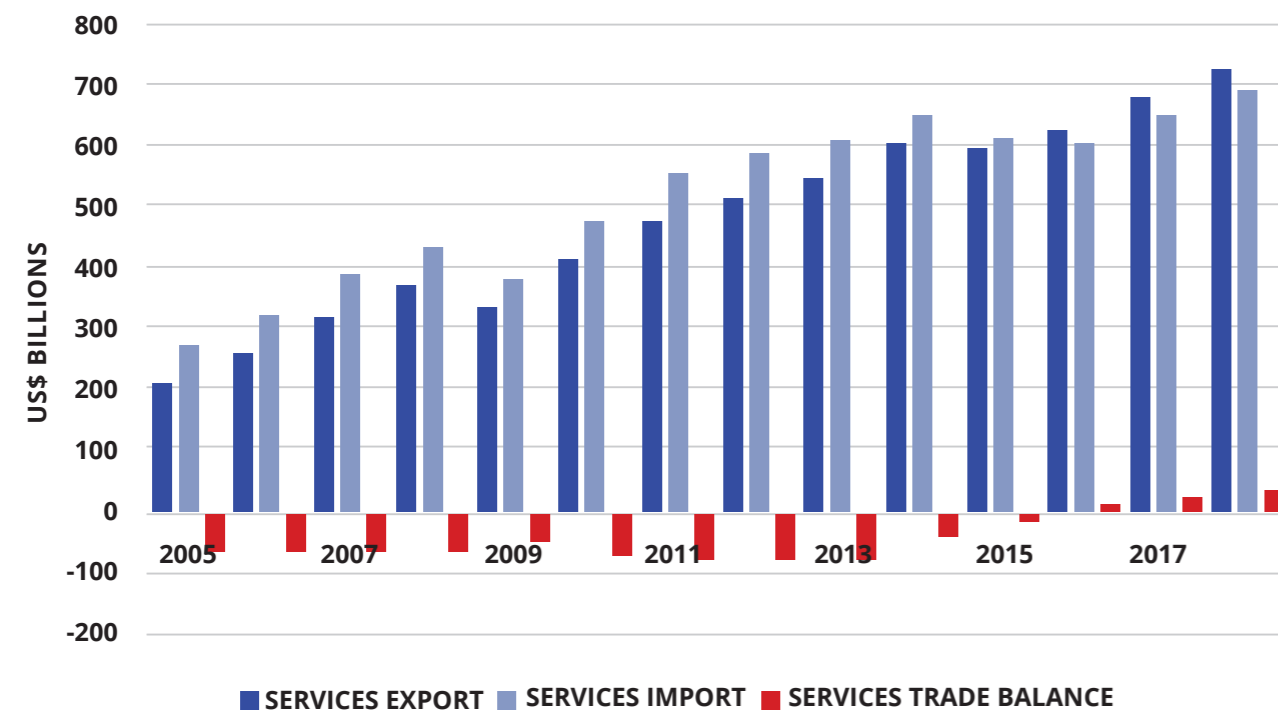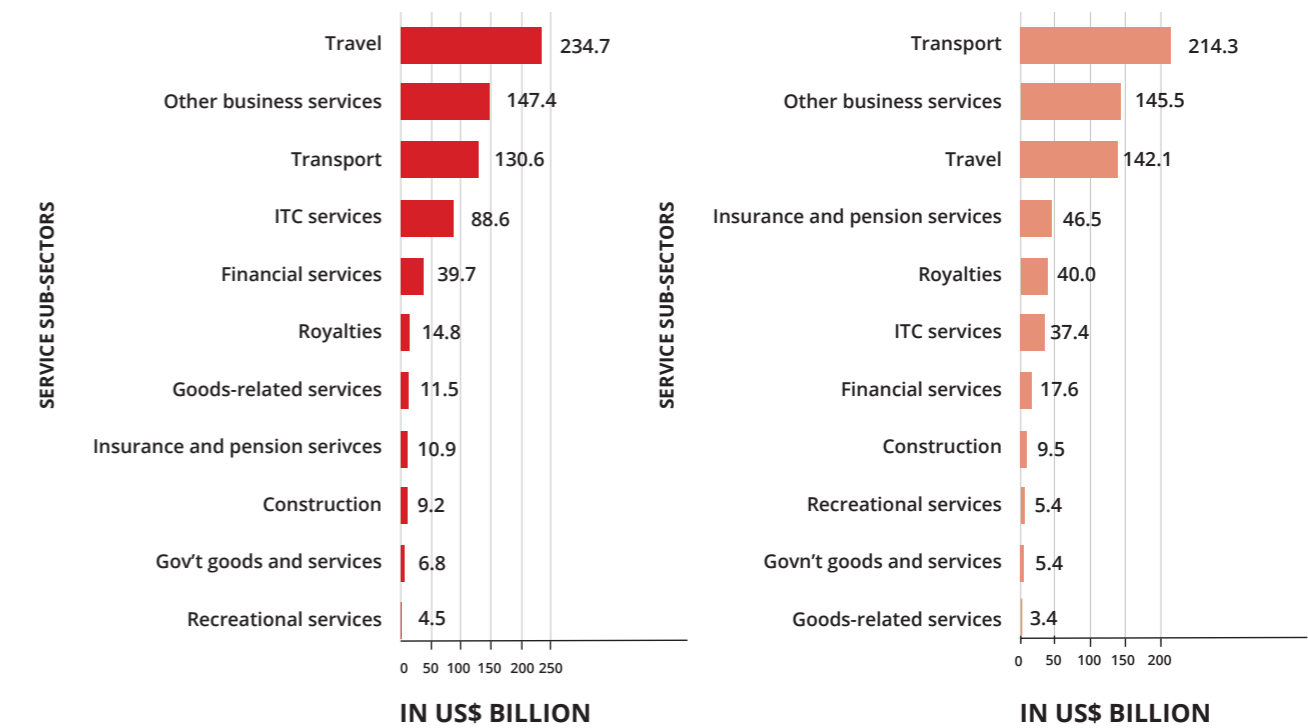
SHARE OF IORA TOTAL SERVICE EXPORTS

SHARE OF IORA TOTAL SERVICE IMPORTS
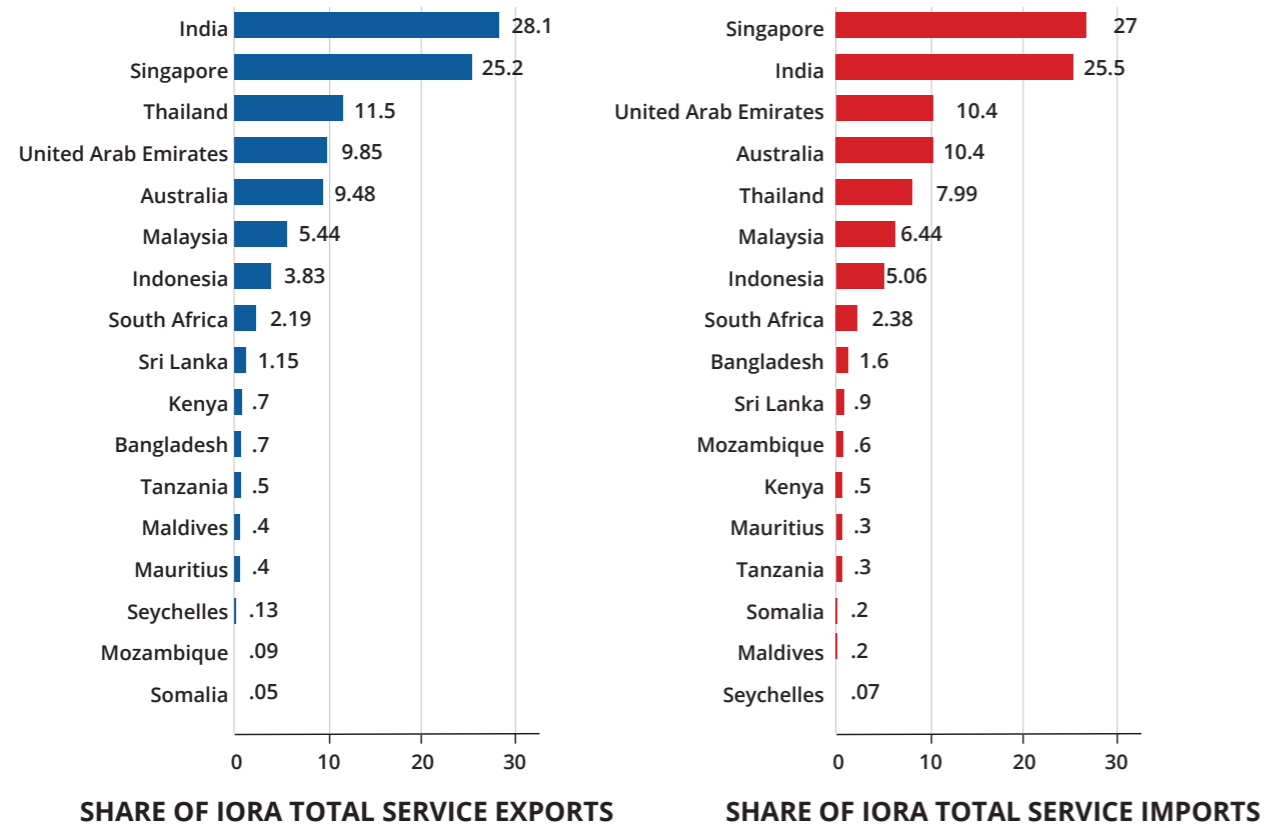
FIGURE 18: INDIVIDUAL COUNTRY'S SHARE OF IORA SERVICE EXPORT AND IMPORT, 2018

Source: Author's calculation using WTO's dataset on trade in commercial services

FIGURE 19: IORA INTRA-REGIONAL TRADE

Source: Author's calculation using trade statistics from UN Comtrade

▌ 4.3 INTRA–REGIONAL GOODS TRADE

Intra-regional trade within IORA has a similar trend to the region's total trade with the world. The total volume of exports and imports has increased almost sixfold from US$171.8 billion in 1997 to US$954.8 billion in 2018 (Figure 19), amounting to approximately 9 per cent annual growth. Despite this, the intensity of intra-regional trade remains significantly below the comparator regions. The intra-IORA trade ratio stood at 21 per cent in 1997 . Twenty-one years later the ratio had risen slightly to 24.2 per cent in 2018, although sustained growth is not evident. The current intra-IORA trade ratio is 35 per cent and 15 per cent lower than corresponding levels in the EU (59.4 per cent) and North America (39.4 per cent), respectively; while it is about half the level in East and Southeast

Asia. Factors such as deeper market integration and a more established and less restrictive regional trade architecture may explain higher intra-regional trade in the EU, East and Southeast Asia, and North America.

It is important to note that some small and low-income IORA economies (including Maldives, Mozambique, Tanzania and Seychelles) trade with IORA members relatively more than the bigger IORA economies (India, Australia, Malaysia, Singapore and Indonesia). More or less half of total trade value for the smaller IORA countries is with IORA members. The larger IORA economies tend to forge closer trade and economic partnerships with countries outside the region. East and Southeast Asia are the most important trading partners, followed by the EU. In 2018 Australia's share of trade with East and Southeast Asia was 62 per cent

of its total world trade, with corresponding shares of 59 per cent for Indonesia, 55 per cent for Malaysia and 48 per cent for Singapore. The corresponding ratio for India and South Africa is almost half, specifically at 27 per cent and 24 per cent respectively.

Drawing from prior literature, it is possible to consider reasons why trade integration within IORA is relatively low. Firstly, barriers to trade and investment are arguably high compared to other regions. Despite notable reductions in recent years, IORA members' tariffs are still relatively high. A simple average applied tariff for all products in 2018 for IORA members was 5.7 per cent, approximately 4 percentage points higher than the EU and 1 percentage point higher than East and Southeast Asia. The prevalence of non-tariff measures (NTMs) could present another important

obstacle to trade. Wignaraja, Collins and Kannangara (2018) report that NTMs notified to the WTO by IORA members jumped from 128 in 2000 to 686 in 2017. In particular, ad hoc and protectionist NTMs, more accurately termed non-tariff barriers (NTBs), make trade more difficult, slower and inefficient than it needs to be. These can become 'sand in the wheels' of GVCs, particularly if applied to imported components required for fabrication into exportable products. In parallel, IORA countries reportedly apply considerably higher restrictive measures to trade in services and foreign direct investment than world averages, which could potentially lower trade within and outside the region. According to Wignaraja, Collins and Kannangara (2018), IORA services trade barriers, as measured by the services trade restrictiveness index are significantly higher than for OECD countries (36.7

[7] Calculated as IORA's total trade with IORA members divided by IORA total trade with the world.

versus 19.5). Investment restrictions, despite some decline since 1997, remain more stringent than those in OECD economies (Wignaraja, Collins & Kannangara 2018).

The second explanation relates to the relative absence of deep regional trade agreements and strong institutions to push a trade agenda forward. The EU is governed by a customs union, which allows free movement of goods, services, investment and people within the region. But most importantly, trade and economic agendas are effectively supported by a resourceful and strong supra-national institution in the form of the European Commission. East Asia does not have this institutional setting, yet it shares the feature of relatively high regional integration; the difference is accounted for by this sub-region's central role in GVCs networks (we elaborate in Section 5). Southeast Asian countries have the 'Association of South-East Asian Nations' (ASEAN) to facilitate and promote social, political and economic integration within the region. Over the decades, ASEAN has transformed itself into an increasingly freer and dynamic economic and production hub strategically connecting itself with East and Southeast Asia economies, as well as the EU and North America. ASEAN and six other countries, including Japan, Korea, China, India[12], Australia and New Zealand, have been negotiating a free trade agreement formally known as the 'Regional Comprehensive Economic Partnership' (RCEP) since 2012. This mega trade deal will create one of the world's largest trading blocs, accounting for 40 per cent of global trade and around one-third of the world's GDP, assuming India does accede.

To date IORA members' vision of economic cooperation has not featured such comprehensive goals. IORA's institutional framework is also at a relatively nascent stage of development. The Secretariat substantially lacks financial resources and does not perform a strong executive or implementing role that would support sophisticated targeted programs (Wignaraja, Collins & Kannangara 2018). Compounding this weak institutional development is the diverse interests of IORA members in pursuing various, and to some extent overlapping, bilateral and multilateral trade agreements. This inevitably creates the symptom of a 'spaghetti bowl' of free trade agreements not only causing confusion and coordination problems, but also diverting IORA members' interest away from regional trade cooperation. In fact, although trade and investment facilitation is among the six priority areas for IORA, a regional trade agreement for IORA has never been seriously considered.

The lack of well-developed GVCs, or interchangeably global production networks, in IORA also contributes to lower intra-regional trade. East and Southeast Asia and Europe have long been known as the most dynamic hubs for production networks and this prompted Baldwin (2012) to label the respective regions 'Factory Asia' and 'Factory Europe'. The rise of GVCs is driven by, inter alia, technological progress; advances in the transport and logistic sector that leads to a significant decline in trade costs; more liberal regional and national policies toward freer trade and investment flows; and the opening up of emerging economies (Amador & Cabral 2016; Athukorala 2011; Baldwin 2012, 2013; De Backer, De Lombaerde & Iapadre 2018; Humphrey & Schmitz 2002). The presence of regional production networks spurs intensive exchange of parts and components thus resulting in higher intra-regional trade. For the East and Southeast Asia region, which has a prevalence of global production networks, about 60 per cent of foreign inputs embodied in the region's exports are sourced from countries within its region (Hing & Thangavelu upcoming). The ratio is relatively low for Europe at about 21 per cent. For IORA members, integration into global production networks remains well behind other regions (we discuss the region's scale and scope of GVC participation in Section 5). As a result, the intensity of trade in intermediate goods and other inputs within the IORA membership is lower.

4.4 GOODS TRADE DYNAMICS AMONG SUB-REGIONS IN IORA

This section takes a closer look at the dynamics of trade between sub-regions in IORA. We classify IORA into five sub-regions (Table 2). Note that the trade figures include both imports and exports, and are constructed by using mirror data[13]. The statistics clearly indicate that Southeast Asian IORA members have the largest intensity of trade transactions compared to the other sub-regions. In 2018 the Southeast Asia sub-region recorded a total trade of US$2,113.7 billion, equivalent to 7 per cent of total world trade. Of this, approximately 28 per cent is trade with IORA and 18.6 per cent within Southeast Asia itself. The sum of trade with other sub-regions represents just 9 per cent of the Southeast Asian sub-region's total trade. The largest component of trade (41.5 per cent) for IORA members from Southeast Asia was with IORA's dialogue partners. This shows that IORA members from Southeast Asia have not had much trade connection with other IORA economies.

The South Asian sub-region's trade is just under half of the South East Asian sub-region's trade. Of the South Asian sub-region's US$943.4 billion trade with the world in 2018, 24 per cent was with other IORA economies (around 9 per cent each with the Southeast Asia and Middle East sub-regions, respectively). Unlike economies in the Southeast Asia sub-region, intra-regional trade within the South Asian sub-region was extremely low, accounting for a mere 1.8 per cent of total trade with the world. The African sub-region has moderate trade connections with other IORA economies, at 24.2 per cent. For the African sub-region in 2018, approximately 9 per cent of trade came from the South Asian sub-region, 5.5 per cent from IORA members in its own sub-region, 3.6 per cent from IORA members in the Middle East sub-region and 1.2 per cent from the Oceania sub-region (Australia). Measured in relative terms, the Middle East sub-region had the strongest trade connection with IORA members. IORA members' ratio of trade with the world was 44 per cent; whereas IORA countries from the Middle East sub-region trade more with the South Asian sub-region than their own sub-region. About 25 per cent of trade came from the South Asian sub-region, 3.6 per cent from their own sub-region, 11.6 per cent from the Southeast Asian sub-region, 2.4 per cent from the African sub-region and 1.7 per cent from the Oceania sub-region.

Lastly, the Oceania sub-region (Australia) seems to have the weakest trade relations with other IORA countries. The sub-region's trade with IORA represents 17 per cent of its total trade with the world, 10 percentage points lower than for the Southeast Asian sub-region's trade with IORA members. Among the four sub-regions, Southeast Asia is the largest trade partner for Oceania (Australia) with a trade share of 11.6 per cent, followed by South Asia. Another common feature arising from these statistics is that IORA's dialogue partners have a significant proportion of trade with all IORA sub-regions, with shares ranging from 60.4 per cent for Oceania to 41.5 per cent for Southeast Asia, 38 per cent for Africa, and 31 per cent for the Middle East.

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[12] While India participated in RCEP negotiations, at the 3rd RCEP Summit in Bangkok on 4 November 2019 it did not sign the agreement to finalise the deal. See https://dfat.gov.au/trade/agreements/negotiations/rcep/Pages/regional-comprehensive-economic-partnership.aspx, accessed November 30 2019.

[13] Some sub-regions under reported their trade transactions resulting in notable discrepancies in total trade data. Mirror data corrects for this by using information from the partner when a country does not report its trade. For further clarification consult this explanation: https://wits.worldbank.org/wits/wits/witshelp/Content/Data_Retrieval/T/Intro/B2.Imports_Exports_and_Mirror.htmworld.

Table 2: IORA total trade by sub-regions within IORA*, with IORA partners and with the world in 2018

IORA sub-Region*	Intra-IORA trade by sub-Region*					TOTAL Intra-IORA trade	Trade with IORA partners	Trade with world
	Oceania	Southeast Asia	South Asia	Africa	Middle East			
Value (in billion USD)								
Oceania	-	56.6	18.4	3.0	6.1	84.2	294.6	487.6
Southeast Asia	57.1	393.9	79.8	11.7	42.2	584.8	876.2	2113.7
South Asia	21.3	85.8	16.7	21.8	90.0	235.6	301.1	943.4
Africa	2.5	10.5	15.2	13.2	8.8	50.3	91.8	242.1
Middle East	3.0	12.4	30.0	5.7	13.2	64.4	112.8	364.0
Share of total world trade by IORA sub-region and by IORA partners (%)								
Oceania	-	11.6	3.8	0.6	1.3	17.3	60.4	100
Southeast Asia	2.7	18.6	3.8	0.6	2.0	27.7	41.5	100
South Asia	2.3	9.1	1.8	2.3	9.5	25.0	31.9	100
Africa	1.1	4.3	6.3	5.5	3.6	20.8	37.9	100
Middle East	0.8	3.4	8.2	1.6	3.6	17.7	31.0	100
Sub-regional share of total intra-IORA trade (%)								
Oceania	-	67.3	21.9	3.5	7.2	100	-	-
Southeast Asia	9.8	67.4	13.7	2.0	7.2	100	-	-
South Asia	9.0	36.4	7.1	9.3	38.2	100	-	-
Africa	5.1	20.8	30.2	26.3	17.6	100	-	-
Middle East	4.7	19.3	46.6	8.9	20.5	100	-	-

*** IORA Members by sub-region**: Oceania (Australia), Southeast Asia (Indonesia, Malaysia, Singapore and Thailand), South Asia (Bangladesh, India, Maldives and Sri Lanka), Africa (Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa and Tanzania), and Middle East (Iran, Oman, UAE and Yemen).*

Source: *Author's calculation using trade statistics from UN Comtrade*

5. IORA MEMBERS IN GLOBAL VALUE CHAINS

This section considers IORA members' integration into GVCs; the key feature of economic globalisation and a new reality in international commerce. Integration into GVCs offers a wide range of economic benefits, including increasing trade and investment, enhancing manufacturing capabilities, business linkages, as well as skills and technological development (Baldwin 2012; UNCTAD 2013; WB 2019). As ASEAN and the EU have shown, it also has the potential to increase regional integration through enhanced intra-regional trade in intermediate goods, components and other inputs. Consequently, many countries compete to be part of value chains and embrace GVC thinking in their trade and industrial development strategies.

5.1. GVC PARTICIPATION INDEX

Since GVCs involve a series of exchanges of intermediate inputs from various countries at different geographic locations, conventional trade statistics that record bilateral trade flows in gross terms, fail to truly capture the real contribution of source countries in a given economy's production and exports. This serious limitation has prompted scholars to develop appropriate proxies to measure the scale and depth of a country's participation in GVCs. For example, Hummels, Ishii and Yi (2001) use trade statistics from input-output tables to gauge the imported content of exports, labelled as vertical specialisation (VS); while Johnson and Noguera (2012) use the ratio of value-added exports to gross exports (or VAX ratio) to capture value-added trade. Koopman et al. (2010) decomposed gross exports into five terms and define their GVC participation index as a sum of domestic value added in third countries' exports (forward GVC participation) and foreign value-added

embodied in exports (backward GVC participation) to gross exports.[14] Koopman et al.'s (2010) GVC measure is widely used in empirical literature as well as by international organisations (e.g. OECD and UNCTAD) to construct their respective GVC databases. This paper adopts the definition and measurement for GVC participation from Koopman et al. (2010) in order to illustrate the degree of GVC participation for IORA members in comparison to other regions. Some of the GVC indicators presented below are extracted from the UNCTAD-Eora Global Value Chain Database.

IORA members' GVC integration trajectory has been moderate (Figure 20), increasing from 41 per cent in 1990 to 43.8 per cent 15 years later, and 47.8 per cent in 2018, albeit essentially flat since the global financial crisis of 2008-9. This is slightly higher than North America but considerably lower than East Asia and Europe. In the North American case the vast US market means that many value chains are contained wholly within the country, rendering it incomparable to IORA's relatively smaller economies. In 2018 about 26.2 per cent of IORA members' exports were inputs into in other countries' exports and 21.7 per cent were foreign value-added in the form of intermediate imports for production of IORA members' exports. This figure indicates that the prevalence of regional production networks in IORA members' remains significantly low compared to East Asia and Europe, resulting in lower intra-regional trade intensity. In other words, IORA members have yet to fully benefit from the global development force of value chains.

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14 Gross exports were broken down into five terms: (1) Domestic value-added embodied in exports of final goods and services absorbed by the direct importer; (2) domestic value-added embodied in exports of intermediate inputs used by the direct importer to produce its domestically needed products; (3) domestic value-added embodied in intermediate exports used by the direct importer to produce goods for third countries; (4) domestic value-added embodied in intermediate exports used by the direct importer to produce goods shipped back to source; and (5) value-added from foreign countries embodied in gross exports or known as foreign value added used in exports.
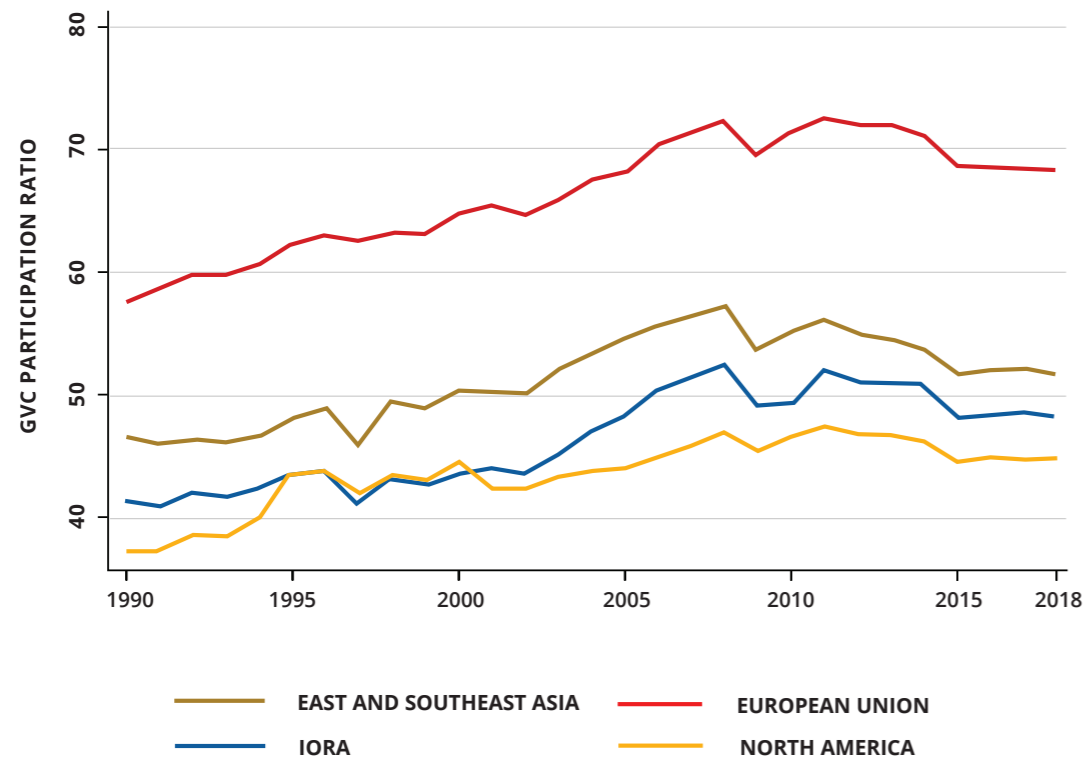15 https://worldmrio.com/unctadgvc/

FIGURE 20: GVC PARTICIPATION BY KEY REGIONS, 1990-2018

Source: Author's calculation using trade statistics from UNCTAD-Eora Global Value Chain Database

FIGURE 21: GVC PARTICIPATION IN IORA BY COUNTRY, 2018

Source: Author's calculation using trade statistics from UNCTAD-Eora Global Value Chain Database

Note: Forward GVC participation refers to share of domestic value-added in third countries' exports to gross export. Backward GVC participation is the share of foreign value-added to gross exports.

There is huge diversity in the degree and types of GVC participation among IORA economies. Unsurprisingly, Singapore and Malaysia have been most active in integrating into value chains with GVC participation ratios[16] of 75.5 per cent and 73.9 per cent, respectively. South Africa, Tanzania, Mauritius and Thailand also have reasonably high rates of GVC participation, whereas Bangladesh and Sri Lanka are behind in terms of integration in value chains. Small open economies such as Singapore and Malaysia tend to source more inputs from abroad than larger and resource-based economies, which produce more domestic value-added and export to other countries. In 2018, the share of foreign value-added in gross exports was 61.8 per cent for Singapore, 39.5 per cent for Tanzania and 35.5 per cent for Malaysia. The ratio was significantly greater than larger and resource-based economies such as India, Australia, Iran and Oman. Higher domestic value-added embodied in

third country's exports are found in South Africa (39.1 per cent), Iran (34 per cent), Oman (33 per cent), and a few other countries.

Clearly, simply participating in GVC networks is not enough to confer development as the Australian case makes clear. Much depends on the terms of integration, in other words, where a country's industries are situated in GVCs. The lower down the technological ladder a country is, the further it has to climb on the ladder of development. Climbing that ladder is where the development benefits are to be derived. Australia has strong institutions, including scientific and technological research capacity, as well as strong capabilities in a range of cutting-edge industries, including services that are at the apex of value chains. The same cannot be said of most IORA members.
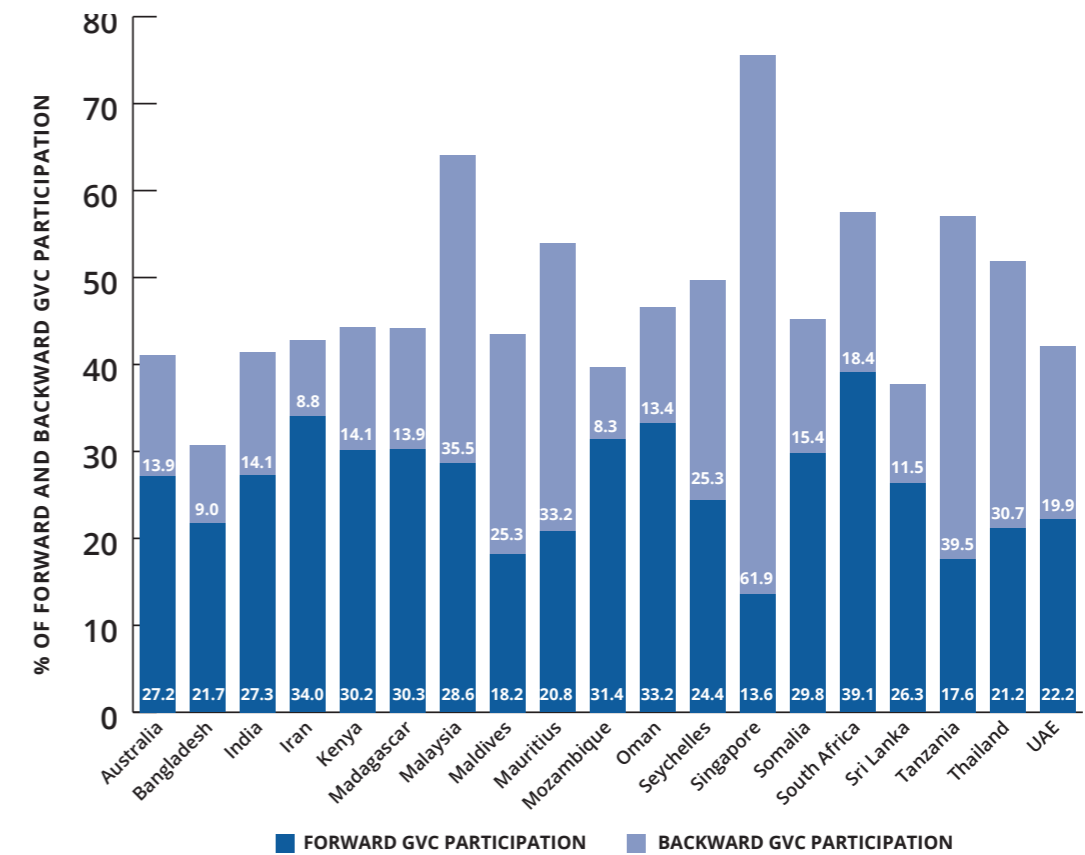
Notable differences in depth and characteristics of GVC participation among IORA economies reflect different economic conditions and other fundamental factors. Although GVCs are a global phenomenon, not every country has managed to successfully integrate into and benefit from them. Factors that determine value chain activities are multi-faceted and can include location, structural and economic conditions, regulatory and policy frameworks, the quality of infrastructure and logistics services, business and investment facilitation, and the availability and quality of human capital. For example, Kowalski et al. (2015) found that structural factors such as market size, distance to manufacturing hubs, and degree of industrialisation have a stronger effect on GVC participation. Furthermore, policy factors such as intellectual property protection and quality of institutions are also found to have effects on GVC

participation. Dollar, Ge and Yu (2016); Pathikonda and Farole (2017) emphasised the role of the institutional framework, and found that countries with better institutions have higher GVC participation ratios.

Recent research from East Asian economies by Hing and Thangavelu (upcoming) also found evidence that trade policies in the form of tariff reform, free trade agreements, trade facilitation, proximity to and quality of transport and logistics systems also play significant roles in determining the magnitude of GVC participation in East and Southeast Asia. The results also highlight the importance of education and skills in enhancing a country's engagement in forward GVC activities. It is important to emphasise that an empirical investigation of the determinant factors of GVC participation in IORA would be necessary and

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[16] The UNCTAD-Eora GVC participation ratio is computed following Koopman et al. (2010). In general, GVC participation is the percentage of foreign value-added (FVA) and domestic value-added in total exports. FVA is the share of a country's exports that consist of inputs that have been produced in other countries while the domestic value added represents the contribution of the domestic sector to the exports of other countries.

important for enhancing the region's policy initiatives. This research is beyond the scope of this report. However, from the preceding analysis it is reasonable to argue that individual economies, and IORA as an inter-governmental institution, need to deepen their cooperation on building regional connectivity if they wish members to succeed in integrating into GVCs and making them work for regional and national development.

| 5.2. TRADE IN PARTS AND COMPONENTS

Understanding how each of the countries and sub-regions in IORA connect to each other in terms of a framework of regional production networks is important. But since the UNCTAD-Eora Global Value Chain Database has some limitations concerning sources and destinations of value-added trade, the following analysis relies on data on trade in parts and components deriving from UN Comtrade. We have adopted the methodology from Athukorala (2011) who

defines parts and components based on the commodity nomenclature of the Standard International Trade Classification (SITC) system[17]. We also borrow the term 'network trade' from Athukorala (2011) to describe the exchange of parts and components.

In 2018, IORA members recorded US$503.9 billion of exports in parts and components equivalent to 28.4 per cent of the region's total exports (table 3). The most dominant sector was electrical machinery (SITC 77) with US$231.4 billion of exports. The other major sectors were road vehicles (US$77.1 billion), office machines (US$64.5 billion), and telecommunication equipment (US$31.8 billion). The value is slightly greater than that of North America but less than half that of East and Southeast Asia, and almost a quarter of the EU. In the same year, imports of parts and components amounted to US$645.9 billion or 32 per cent of total imports. The statistics also show that North America, and to a lesser extent IORA members,

consumes more parts and components than they produced as manifested in greater value of imports compared to exports. In contrast, economies in East and Southeast Asia are huge exporters of parts and components.

IIORA members' trade in parts and components, or network participation, was driven by Southeast Asian IORA economies. In 2018, export of parts and components from Southeast Asia amounted to US$421.1 billion, representing about 39 per cent of the sub-region's total world exports and 84 per cent of IORA members' exports of this particular product group. South Asia was the second largest IORA sub-region that had significant exports of parts and components, with value of US$49.4 billion. IORA economies in Oceania (Australia) and the Middle East are far behind in network trade as these two sub-regions are relatively large consumers of these products compared to the few they export.

Table 4 presents trade in parts and components with the regions with which IORA member states trade most significantly, and the extent to which this differs across IORA sub-regions. Similar to trade in final goods, economies in East and Southeast Asia and IORA dialogue partners are major partners in network trade. The share of network exports to total IORA network exports for East and Southeast Asia was 40 per cent and 37 per cent for IORA dialogue partners, respectively. Import intensity is even greater as reflected by the higher share to total network imports at 63 per cent for East and Southeast Asia and 58 per cent for IORA dialogue partners. Economies in IORA exchange parts and components with each other moderately, with intra-regional network trade ratios of 26.4 per cent for exports and 17.4 per cent for imports.

These statistics show the IORA network trade

pattern seems to be driven by Southeast Asian IORA economies. More than three quarters of network exports and half of the imports of IORA are from Southeast Asia. Besides, East and Southeast Asia, IORA dialogue partners and to lesser extent IORA members are the sub-region's major partners in network trade. In relative terms, Oceania (Australia), South Asia, Africa and the Middle East have similar levels of network trade intensity with East and Southeast Asia, IORA dialogue partners and IORA members. The notable difference though is the absolute value and direction of trade. For example, while Oceania exports parts and components valued at a mere US$1.5 billion to IORA members, US$2.2 billion to East and Southeast Asia, and US$3.8 billion to IORA dialogue partners, its volume of network imports is relatively large at US$53.5 billion from East and Southeast Asia and US$58.1 billion IORA dialogue partners. However, in relative terms the shares of network exports to IORA's dialogue partners over total network trade for Oceania (Australia) and Southeast Asia are exactly the same.

| 5.3. OBSERVATIONS ON NETWORK TRADE

At least two observations can be drawn from the preceding analysis of network trade. Firstly, it confirms the earlier main GVC indicator that IORA members' participation in GVCs lags behind other regions. In addition, the scale and scope of integration in IORA members' regional production are uneven among its sub-regions. Southeast Asia IORA economies are the most prominent in leveraging GVCs, whereas economies in Oceania (Australia), Africa and the Middle East have failed to integrate well into network trade and production networks.

Secondly, and related to this, IORA member states seem to have not received significant GVC-oriented FDI, particularly from advanced economies whose

Table 3: Trade in parts and components by region, 2018

	Export of parts and components (billion USD)	Share to total exports (%)	Imports of parts and components (billion USD)	Share to total imports (%)
IORA	503.9	28.4	645.9	32.1
East and Southeast Asia	1111.9	44	747.1	30.5
European Union	1857.0	30.3	1820.7	30
North America	439.9	24.1	1197.2	39
World	4422.09	27.7	5283.2	33.1
Sub-regions in IORA				
Oceania	10.3	4.1	84.9	36.1
Southeast Asia	421.1	38.6	342.2	33.5
South Asia	49.4	15.3	100.8	16.2
Africa	16.8	15.2	31.1	23.6
Middle East	6.3	5.3	86.9	35.5

Source: Author's calculation using trade statistics from UN Comtrade

[17] He identified seven product categories as significant (SITC 75, SITC 76, SITC 77, SITC 78, SITC 87, SITC 88, and SITC 89), and uses them as a proxy to measure the depth and intensity of regional production networks.

Multinational Corporations (MNCs) drive the establishment of regional production networks. In East and Southeast Asia, for example, there are Japanese and Korean corporations that take a leading role in setting up production and firm network arrangements.

They are the key agents in the 'slicing up' of their production into various stages across different countries. They then coordinate with their affiliates, contractual partners and arm's-length suppliers in the production of intermediate inputs, production

Table 4: Matrix of network trade by sub-region, 2018

	IORA	EAST AND SOUTHEAST ASIA	EUROPE	NORTH AMERICA	IORA PARTNERS	WORLD
Export value (billion USD)						
IORA	133.0	203.4	61.5	59.0	182.5	503.9
Oceania	1.5	2.2	1.6	1.9	3.8	10.3
Southeast Asia	110.6	194.2	44.4	48.1	156.6	421.1
South Asia	17.5	5.3	7.6	8.1	14.2	49.4
Africa	2.0	1.3	7.3	0.8	7.1	16.8
Middle East	1.5	0.3	0.6	0.2	0.7	6.3
Share of total network exports (%)						
IORA	26.4	40.4	12.2	11.7	36.2	100
Oceania	14.8	21.6	15.3	18.3	37.2	100
Southeast Asia	26.3	46.1	10.5	11.4	37.2	100
South Asia	35.4	10.8	15.5	16.3	28.8	100
Africa	12.0	7.8	43.2	4.6	42.2	100
Middle East	23.1	4.6	8.9	3.0	11.6	100
Import (value, in billion USD)						
IORA	112.1	407.9	80.3	49.4	376.2	645.9
Oceania	12.1	53.5	14.9	9.9	58.1	84.9
Southeast Asia	68.3	224.9	29.7	26.0	184.4	342.2
South Asia	12.4	65.3	13.3	6.1	62.8	100.8
Africa	4.3	15.0	8.4	1.9	19.8	31.1
Middle East	15.0	49.3	14.0	5.6	51.2	86.9
Share of total network imports (%)						
IORA	17.4	63.2	12.4	7.7	58.2	100.0
Oceania	14.3	63.0	17.5	11.6	68.4	100.0
Southeast Asia	20.0	65.7	8.7	7.6	53.9	100.0
South Asia	12.3	64.8	13.2	6.0	62.3	100.0
Africa	13.7	48.1	26.9	6.1	63.5	100.0
Middle East	17.3	56.7	16.2	6.4	58.9	100.0

Source: *Author's calculation using trade statistics from UN Comtrade*

assembly and distribution of those final goods. Despite this, host governments play an important role in ensuring a conducive business and investment climate and providing sufficient and quality infrastructure and human capital. Equally important is a more liberal trade and investment regime that facilitates freer movement of goods, services and investment. East and Southeast Asia is striving to build a more competitive and dynamic production hub, with ASEAN linking with economies that are major outward investors like Japan, Korea, and to lesser extent Taiwan, as well as connecting to the region's other huge exporting and importing economy, China. These economies share a common economic vision to push their trade and investment agenda forward in various arenas: unilateral, bilateral and regional.

IORA remains far behind on all these fronts. However, it is unique in terms of institutional setting, composition of members and their geographical locations. This raises a number of critical questions:

1. Is it feasible to transform the region into a more dynamic regional production network?

2. If so, which economies could drive it?

3. What should IORA as a regional institution do to promote a GVC-centric agenda?

It is important to reemphasise that whatever economic direction is chosen by individual economies and IORA as a region, more liberal and less restrictive trade and investment policies, as well as greater resources devoted to regional cooperation, are necessary and important.

FIGURE 22: FDI INFLOW BY REGION, 1997-2018

Source: Author's calculation using trade statistics from UNCTADStat
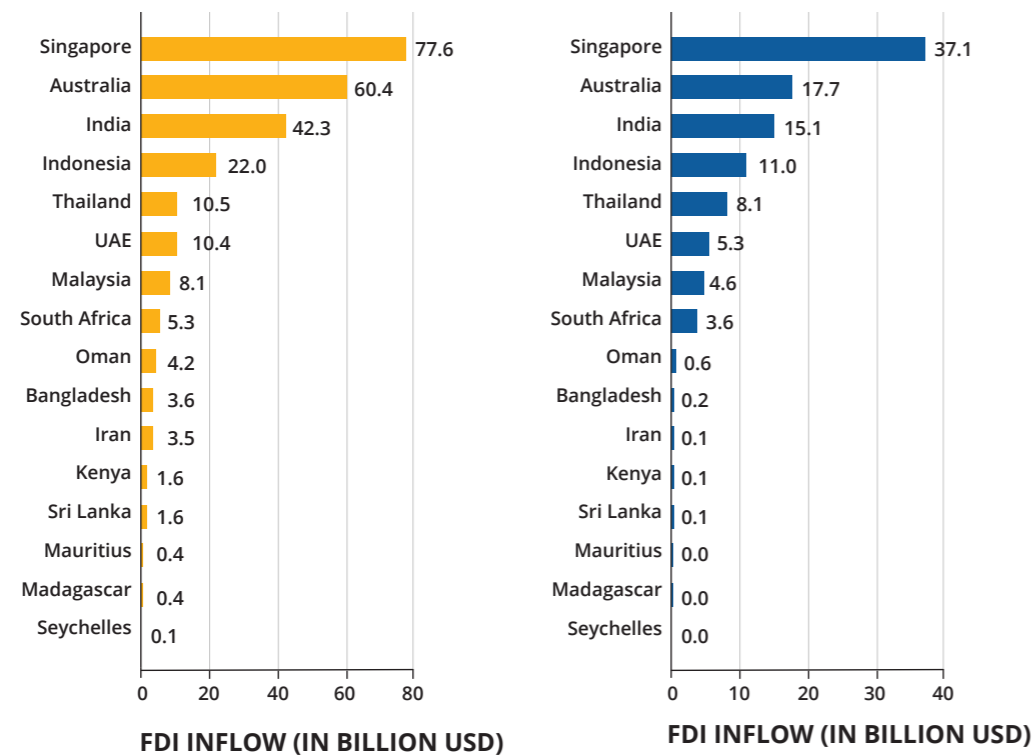
FIGURE 23: FDI FLOW BY COUNTRY, 2018

Source: Author's calculation using trade statistics from UNCTADStat

6. STATE OF INVESTMENT IN IORA

The analysis to date has focused on IORA members' economic potential, and understanding the trade dynamics characterising members' interactions. However, for GVC integration to occur, foreign direct investment (FDI) flow into and out of IORA members will be essential. Over the past three decades FDI has increased gradually both in terms of absolute and relative values (Figure 22). In 2018, the value of FDI inflow into IORA was US$256.5 billion, almost double the value in 2008 and nearly six times the amount in 1997. The 2018 figure represents about 20 per cent of global FDI inflow, and is double IORA's share in 1997. However, IORA still lags behind other regions in attracting global investment. East and Southeast Asia recorded the highest FDI inflow in 2018 (US$438.1 billion, which represents approximately 34 per cent of the world investment inflow. North America is the second largest investment destination with an inflow of US$291.5 billion or 22 per cent of global inflows, followed by the EU with US$268.5 billion.

Investment abroad made by IORA members is significantly less than in other regions. In 2017, the amount of FDI outflow from IORA members was US$107.5 billion. The sum, which accounts for 7 per cent of global investment outflow, was about 20 per cent of the figure for East and Southeast Asia and about a quarter of investments made by North America and the EU. This underscores the point that IORA members are not dynamic sources of GVC investments, and are takers rather than shapers of economic globalisation.

As with the case of trade, investment performance among IORA members varies significantly and is dominated by a small group of countries. As shown in Figure 23, in 2018 Singapore was the largest FDI destination in IORA, receiving US$77.6 billion of investment inflow. This amount represents approximately 6 per cent of global investment inflow and 30 per cent of investment into IORA. The other major investment recipients are Australia (US$60.4 billion), India (US$42.3 billion) and Indonesia (US$22 billion). Countries such as Thailand, UAE, Malaysia and South Africa receive moderate investment inflows, yet the absolute values are still significantly higher than the remaining IORA members. Similar distribution is found in FDI outflow. In 2018 Singapore, Thailand, UAE, India, Indonesia, Malaysia and South Africa were the top countries. The striking difference is Australia, whose investment outflow was almost 17 times less than its investment inflow.

▎ ANNEX 1: TABLES

▎ **Table A: List of countries in key regions and sub-regions**

Regions	Countries
IORA	Australia, Bangladesh, Comoros, Indonesia, India, Iran, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, UAE and Yemen
East and Southeast Asia	Brunei Darussalam, Cambodia, China, Hong Kong (China), Macao (China), Japan, Korea, Rep, Lao PDR, Myanmar, Philippines, Vietnam
European Union	Austria, Belgium, Belgium-Luxembourg, Cyprus, Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, United Kingdom, Greece, Hungary, Ireland, Lithuania, Luxembourg, Latvia, Malta, Netherlands, Poland, Portugal, Slovak Republic, Slovenia, Sweden
North America	Canada, Mexico, United States
IORA's dialogue partners	China, Egypt, France, Germany, Japan, Korea, Turkey, United Kingdom, USA, Italy

IORA's sub-regions	Countries
Oceania	Australia
Southeast Asia	Indonesia, Malaysia, Singapore, Thailand
South Asia	Bangladesh, India, Maldives, Sri Lanka
Africa	Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa, Tanzania
Middle East	Iran, Oman, UAE, Yemen

▎ **Table B: Per capita GDP growth in IORA member states (for selected years)**

Member States	Growth rates for selected years								Average Growth	
	1996	1999	2002	2005	2008	2011	2014	2017	1996-2007	2008-2017
Australia	2.52	3.88	2.74	1.85	1.60	1.05	1.05	0.63	2.47	0.98
Bangladesh	2.32	2.57	1.96	4.97	4.81	5.25	4.86	6.14	3.42	5.07
Comoros	-3.96	-0.67	-0.12	0.42	1.53	1.61	-0.30	0.40	0.11	0.67
India	5.53	6.90	2.06	6.23	1.59	3.89	6.19	6.04	4.74	5.42
Indonesia	6.22	-0.61	3.09	4.29	4.62	4.75	3.64	3.84	1.97	4.10
Iran	3.73	-0.43	5.93	1.99	-0.84	1.45	3.27	2.33	3.05	1.00
Kenya	1.16	-0.49	-2.14	3.05	-2.50	3.29	2.69	2.42	0.71	2.33
Madagascar	-0.99	1.41	-15.30	1.56	4.11	-1.31	0.56	1.55	0.51	-0.27
Malaysia	7.23	3.58	3.22	3.28	2.85	3.67	4.60	4.47	2.76	3.16
Maldives	5.76	4.21	4.40	-15.40	6.84	4.35	2.54	2.41	4.04	1.17
Mauritius	4.51	1.31	0.91	1.18	5.01	3.91	3.56	3.72	3.78	3.69
Mozambique	23.05	5.13	5.65	5.63	3.98	4.21	4.48	0.77	7.03	3.37
Oman	1.55	-0.26	-2.79	-0.19	4.51	-7.49	-3.95	-4.89	1.03	-1.38
Seychelles	3.39	-0.11	-1.83	8.50	-4.31	10.76	2.89	3.06	2.91	2.40
Singapore	3.19	4.88	2.97	4.86	-3.41	4.07	2.56	3.61	3.62	2.49
South Africa	2.31	0.88	2.40	3.98	1.82	1.72	0.25	-0.10	2.22	0.27
Sri Lanka	3.10	3.75	3.14	5.38	5.20	7.68	3.99	2.26	4.24	4.82
Tanzania	1.82	2.44	4.22	4.49	2.73	4.55	3.58	3.64	3.03	3.19
Thailand	4.49	3.37	5.27	3.52	1.19	0.36	0.55	3.67	2.58	2.62
United Arab Emirates	0.63	-2.40	-2.75	-7.02	-10.21	2.19	4.21	-0.55	-2.22	-1.23
Yemen	0.87	0.89	0.97	2.61	0.76	-15.11	-2.80	-8.19	1.40	-5.26

Source: *Author's calculation using World Bank Indicators.*

❙ Table C: Real GDP in IORA member states in billion US$ (for selected years)

Member States	1996	1999	2002	2005	2008	2011	2014	2017
Australia	720	820	900	1000	1100	1200	1300	1400
Bangladesh	55	64	73	86	100	120	150	180
Comoros	0.59	0.63	0.74	0.79	0.85	0.94	1	1.1
India	700	840	950	1200	1400	1800	2100	2700
Indonesia	470	430	490	570	680	800	940	1100
Iran	290	300	340	400	460	500	480	560
Kenya	25	26	27	31	36	42	50	58
Madagascar	5.7	6.5	6.3	7.6	9.1	8.9	9.6	11
Malaysia	140	150	170	200	240	270	310	360
Maldives	1.3	1.6	1.7	1.7	2.6	2.8	3.3	3.9
Mauritius	5.4	6.2	7.1	7.9	9.3	10	12	13
Mozambique	3.4	4.6	5.7	7.1	8.9	11	13	15
Oman	37	40	44	44	53	58	68	74
Seychelles	0.63	0.78	0.79	0.78	0.93	1	1.2	1.3
Singapore	110	130	140	170	210	250	290	320
South Africa	240	260	280	320	370	390	410	430
Sri Lanka	28	32	35	42	51	61	73	83
Tanzania	14	16	19	24	29	34	41	50
Thailand	220	210	240	280	320	340	380	420
United Arab Emirates	160	180	210	260	300	310	360	390
Yemen	17	19	22	25	28	27	29	20
Total	**3243.02**	**3537.31**	**3962.33**	**4677.87**	**5408.68**	**6236.64**	**7021.1**	**8190.3**

Source: *Author's calculation using World Bank Indicators.*

❙ Table D: GDP growth rate in IORA member states (for selected years)

	Growth rate for selected years									
COUNTRY	1996	1999	2002	2005	2008	2011	2014	2017	1996 - 2007	2008 - 2017
Australia	3.88	5.07	4.00	3.20	3.66	2.46	2.57	2.34	3.69	2.67
Bangladesh	4.52	4.67	3.83	6.54	6.01	6.46	6.06	7.28	5.28	6.26
Comoros	-1.29	1.92	2.32	2.84	4.00	4.10	2.10	2.71	2.65	3.09
India	7.55	8.85	3.80	7.92	3.09	5.24	7.41	7.17	6.54	6.73
Indonesia	7.82	0.79	4.50	5.69	6.01	6.17	5.01	5.07	3.38	5.46
Iran	5.17	0.86	7.27	3.19	0.25	2.65	4.60	3.76	4.34	2.25
Kenya	4.15	2.31	0.55	5.91	0.23	6.11	5.36	4.86	3.53	5.03
Madagascar	2.15	4.66	-12.67	4.60	7.13	1.45	3.32	4.31	3.62	2.50
Malaysia	10.00	6.14	5.39	5.33	4.83	5.29	6.01	5.90	5.05	4.74
Maldives	7.86	6.18	7.27	-13.13	9.49	8.57	7.33	6.91	6.46	5.23
Mauritius	5.59	2.61	1.61	1.78	5.39	4.08	3.74	3.81	4.65	3.90
Mozambique	26.85	7.82	8.79	8.72	6.88	7.12	7.44	3.74	10.07	6.29
Oman	3.05	-0.12	-1.10	2.49	8.20	-1.11	2.75	-0.93	2.61	4.33
Seychelles	4.92	1.87	1.21	9.01	-2.15	7.89	4.50	4.33	3.98	3.61
Singapore	7.47	5.72	3.91	7.36	1.87	6.26	3.90	3.70	5.91	4.55
South Africa	4.30	2.40	3.70	5.28	3.19	3.28	1.85	1.32	3.68	1.77
Sri Lanka	3.80	4.30	3.96	6.24	5.95	8.40	4.96	3.42	4.98	5.63
Tanzania	4.54	4.86	7.09	7.48	5.69	7.67	6.73	6.79	5.77	6.28
Thailand	5.65	4.57	6.15	4.19	1.73	0.84	0.98	4.02	3.50	3.08
United Arab Emirates	5.80	2.90	2.43	4.86	3.19	6.93	4.40	0.79	5.68	2.93
Yemen	4.63	3.78	3.94	5.59	3.65	-12.71	-0.19	-5.94	4.45	-2.67

Source: *Author's calculation using World Bank Indicators.*

❙ **Table E: Selected regions' trade, 1997-2018**

	1997	2002	2007	2013	2018	CAGR 2002–2018
A. TOTAL TRADE, IN US$ BILLION						
World	9,768.4	12,556.3	26,805.5	36,096.7	36,662.7	8.6%
IORA	806.2	1,126.1	2,574.2	4,497.7	4,274.7	11%
East and Southeast Asia	1,610.7	2,026.6	4,787.2	7,712.6	8,534.6	11%
EU25	3,775.9	4,581.3	9,548.8	10,578.6	11,146.7	7.0%
North America	2,176.3	2,630.4	4,385.8	5,312.8	5,810.8	6.3%
SHARE OF WORLD TRADE (%)						
World	100.0	100.0	100.0	100.0	100.0	
IORA	8.3%	9.0%	9.6%	12.5%	11.7%	
East and Southeast Asia	16.5%	16.1%	17.9%	21.4%	23.3%	
EU25	38.7%	36.5%	35.6%	29.3%	30.4%	
North America	22.3%	20.9%	16.4%	14.7%	15.8%	
B. TOTAL EXPORT, IN US$ BILLION						
World	4,711.2	6,087.9	13,013.9	17,777.1	17,967.7	8.7%
IORA	397.2	578.1	1,279.0	2,174.4	1,990.5	10.6%
East and Southeast Asia	769.4	982.2	2,435.9	3,724.8	4,496.8	11.7%
EU25	1,878.7	2,315.9	4,696.7	5,361.7	5,586.8	7.0%
North America	969.3	1,042.6	1,709.6	2,207.2	2,278.5	5.5%
SHARE OF WORLD EXPORT (%)						
World	100.0	100.0	100.0	100.0	100.0	
IORA	8.4%	9.5%	9.8%	12.2%	11.1%	
East and Southeast Asia	16.3%	16.1%	18.7%	21.0%	25.0%	
EU25	39.9%	38.0%	36.1%	30.2%	31.1%	
North America	20.6%	17.1%	13.1%	12.4%	12.7%	

Source: *Author's calculation using World Bank Indicators.*

❙ **Table E: Selected regions' trade, 1997-2018 (continued)**

	1997	2002	2007	2013	2018	CAGR 2002–2018
C. TOTAL IMPORT, IN US$ BILLION						
World	5,057.1	6,468.4	13,791.6	18,319.6	18,695.0	8.5%
IORA	409.0	548.0	1,295.2	2,323.3	2,284.3	11.4%
East and Southeast Asia	841.2	1,044.4	2,351.3	3,987.8	4,037.9	10.3%
EU25	1,897.2	2,265.4	4,852.1	5,216.9	5,559.9	7.0%
North America	1,207.0	1,587.7	2,676.2	3,105.5	3,532.2	6.9%
SHARE OF WORLD IMPORT (%)						
World	100.0	100.0	100.0	100.0	100.0	
IORA	8.1%	8.5%	9.4%	12.7%	12.2%	
East and Southeast Asia	16.6%	16.1%	17.0%	21.8%	21.6%	
EU25	37.5%	35.0%	35.2%	28.5%	29.7%	
North America	23.9%	24.5%	19.4%	17.0%	18.9%	

Source: *Author's calculation using World Bank Indicators.*

Table F: Selected regions' service trade, 2005-2018

	2005	2010	2015	2018	CAGR 2005–2018	CAGR 2002–2018
A. TOTAL SERVICE TRADE, IN US$ BILLION						
World	5267.7	7756.4	9838.6	11448.7	6.2%	8.6%
IORA	493.8	893.9	1220.2	1421.5	8.5%	11%
East and Southeast Asia	655.3	1082.7	1518.1	1769.0	7.9%	11%
EU	2434.0	3237.5	3977.7	4722.7	5.2%	7.0%
NAFTA	845.9	1189.8	1485.0	1659.2	5.3%	6.3%
SHARE OF WORLD TRADE (%)						
World	100.0	100.0	100.0	100.0		
IORA	9.4%	11.5%	12.4%	12.4%		
East and Southeast Asia	12.4%	14.0%	15.4%	15.5%		
EU	46.2%	41.7%	40.4%	41.3%		
NAFTA	16.1%	15.3%	15.1%	14.5%		
B. TOTAL SERVICE EXPORT, IN US$ BILLION						
World	2657.9	3921.3	4962.6	5845.1	6.2%	8.7%
IORA	215.7	412.7	603.0	729.3	9.8%	10.6%
East and Southeast Asia	301.5	528.9	666.3	778.0	7.6%	11.7%
EU	1267.9	1723.5	2118.3	2544.8	5.5%	7.0%
NAFTA	451.7	655.2	859.4	949.9	5.9%	5.5%
SHARE OF WORLD EXPORT (%)						
World	100.0	100.0	100.0	100.0		
IORA	8.1%	10.5%	12.2%	12.5%		
East and Southeast Asia	11.3%	13.5%	13.4%	13.3%		
EU	47.7%	44.0%	42.7%	43.5%		
NAFTA	17.0%	16.7%	17.3%	16.3%		

Source: Author's calculation using trade statistics from UN Comtrade

Table F: Selected regions' service trade, 2005-2018 (continued)

	2005	2010	2015	2018	CAGR 2005–2018	CAGR 2002–2018
C. TOTAL SERVICE IMPORT, IN US$ BILLION						
World	2609.8	3835.1	4876.1	5603.6	6.1%	
IORA	278.1	481.2	617.3	692.2	7.3%	
East and Southeast Asia	353.8	553.8	851.8	991.0	8.2%	
EU	1166.0	1514.0	1859.4	2177.9	4.9%	
NAFTA	394.2	534.6	625.7	709.3	4.6%	
SHARE OF WORLD IMPORT (%)						
World	100.0	100.0	100.0	100.0		
IORA	10.7%	12.5%	12.7%	12.4%		
East and Southeast Asia	13.6%	14.4%	17.5%	17.7%		
EU	44.7%	39.5%	38.1%	38.9%		
NAFTA	15.1%	13.9%	12.8%	12.7%		

Source: Author's calculation using trade statistics from UN Comtrade

| ANNEX 2: LITERATURE REVIEW

Here we summarise the focus and findings of key literature on trade, investment and connectivity within the IORA region.

Anderson, K 2002, 'Agricultural trade liberalization: implications for Indian Ocean rim countries', Centre for International Economic Studies.

Anderson examines IROA exports and analyses the effects of barriers to trade in agricultural and clothing products. He also discusses the evolution of globalisation and how it might affect the development strategies of IORA countries. He makes the following recommendations related to the IORA context:

• To secure broader market excess abroad, IORA countries should reciprocate in form of providing greater market access to their trading partners; and

• IORA developing countries should seek to further MFN liberalisation of trade in agriculture and clothing in order to reap domestic productivity and consumer benefits.

Agarwala, N & Saha, P 2019, 'Is the Bay of Bengal regaining its lost importance?', Journal of the Indian Ocean Region, pp. 1-10.

The Bay of Bengal was important for world trade until the close of the nineteenth century. The authors argue that weakening imperialism and the newly found independence of nations brought mistrust and weakened the bond of cohesiveness and unity, causing the Bay to lose its identity. This was extenuated by the creation of regional identities of 'Southeast Asia' and 'South Asia'. They argue that while Southeast Asia restored its unity under ASEAN in 1965, and South Asia under SAARC in 1985, no real effort to revitalise the entire swath of the Bay as one entity was made

until the initiation of India's 'Look East' policy in 1991 and subsequent formation of BIMSTEC in 1997. In the new millennium, the rise of China and India, with their interest and focus on this region, has brought about cooperation, connectivity and conflict forcing bilateral, multilateral, regional and sub-regional agreements by littoral states. They argue that this has led the Bay to acquire an importance that cannot be ignored. The paper evaluates these efforts to decipher if the Bay of Bengal is really regaining its lost importance, arguing that this ultimately depends on India's actions given its relative dominance in the region.

Attri, VN 2017, 'The study on bilateral and regional trade and investment related agreements and dialogues between member states', The Indian Ocean Rim Association Secretariat, Ebene.

The key study objectives included: a review of trade and investment flows within the IORA region; mapping of existing FTAs of IORA members; assessing barriers to trade and investments of IORA members; and identification of possible cooperation measures to promote trade and investment. Attri employs the following research methods using various analytical tools: trend analysis, growth analysis, trade indicators using data sourced from databases such as UNCOMTRADE, WDI, WIR.

He makes the following findings:

• IORA exports gradually increased during 1997-2003, accelerating during 2005-2015, while IORA imports rose at a higher speed than exports, with most of the IORA member states' exports destined for their dialogue partners.

• Trade flows within IORA in 2014 were concentrated in the sub-regions of IORA.

• IORA as a whole region has not made much progress in trade liberalisation manifest in relatively low trade openness index at 56 per cent in 2015 and the ratio remained at that level since 1997.

He also provides useful country-level tariffs by broad categories of products, finding that tariff rates in IORA are quite high on most products and exceptionally high for agricultural products in some IORA countries.

He identifies a total of 121 bilateral, plurilateral and ongoing bilateral and plurilateral RTAs in IORA, with Singapore, Australia, Thailand, Malaysia, India and Indonesia being most active.

Boughanmi, H, Akintola, A, Kotagama, H & Zaibet, L 2019, 'Looking East: Oman's trade integration in the Indian Ocean Rim Association (IORA)'.

The study aims to analyse the pattern of IORA-Oman trade and estimate the trade potential of Oman with countries in the IORA region using a combination of descriptive statistics for trend and growth analysis, and a gravity model to estimate the determinants of bilateral trade and trade potential for Oman. Key content/findings include, inter alia:

• Trade within the region exhibited an increasing trend with intra-regional trade share growing from 28.3 per cent in 2006 to 31.3 per cent in 2011, but decreased to 24.1 per cent in 2015.

• On average, IORA intra-trade is higher than that found in the GCC (10.65 per cent), ASEAN (24.5 per cent), MERCUSOR (13.36 per cent) and SAARC (6.95 per cent).

• Factors that hinder further regional integration

include significant disparities in size, resource endowment and economic incompatibility, as well as the lack of coherent trade policy regimes including unified tariff structures, and high non-tariff barriers.

• IORA is well integrated into world trade and its formation has resulted in trade creation rather than trade diversion confirming the open regionalism advocacy of the region.

Doyle, T 2018, 'Blue Economy and the Indian Ocean Rim', Journal of the Indian Ocean Region, vol. 14, no. 1, pp. 1-6.

Doyle raises a number of issues in his article, such as the concept of the "Blue Economy" (BE), which broadly conceptualises oceans as 'shared development spaces'. He explains that the Blue Economy concept combines geo-economic, geo-environmental and geo-strategic ordering principles. He notes that the Indian Ocean Rim (IOR), with nearly half the world's population by 2050, in geopolitical terms, is moving away from being identified as the 'Ocean of the South' to the 'Ocean of the Centre', and its core position in terms of global trade, industry, labour, environment and security will increasingly shape the planet in the twenty-first century.

Rahman, MM, Jiang, Q, Ara, LA & Kai, Z 2014, 'Assessing the Economic Impact of the Proposed "Indian Ocean Rim-Association for Regional Cooperation (IOR-ARC)" Preferential Trade Agreement', Global Trade and Customs Journal, vol. 9, no. 10, pp. 478-492.

The study finds that IORA members are diverse in terms of level of development and most of them are actively pursuing bilateral and regional trade agreements. They note that trade as a whole in the

IORA region has increased significantly, with intra-regional trade representing about 14 per cent of the region's total trade in 2012. Their data points to the following countries being the major traders – Australia, India, Indonesia, Malaysia, Singapore and Thailand. They add that liberalisation through tariff cuts will produce significant welfare gains for all IORA countries except Madagascar. The biggest welfare gain could be made by India – US$10.8 billion followed by Australia at US$5.8 billion. Thailand, UAE, Indonesia and Singapore are also projected to make considerable gains under a preferential trade agreement.

Voyer, M, Schofield, C, Azmi, K, Warner, R, McIlgorm, A & Quirk, G 2018, 'Maritime security and the Blue Economy: intersections and interdependencies in the Indian Ocean', Journal of the Indian Ocean Region, vol. 14, no. 1, pp. 28-48.

Maritime security is essential to supporting the Blue Economy. Many maritime security forums have been key supporters of the Blue Economy concept, particularly in the Indian Ocean Region (IOR). This paper explores the co-evolution and co-dependence of Blue Economy and maritime security agendas, with a particular focus on the IOR. It identifies two primary interactions between Blue Economy and maritime security interests. Firstly, maritime security is an enabler of the Blue Economy, for example, through safeguarding navigation routes, providing important oceanographic data to marine industries and protecting rights over valuable marine resources and activities within claimed zones of maritime jurisdiction. Secondly, an often-overlooked role that maritime security plays in the Blue Economy is by being itself a source of economic development and growth. An expanded Blue Economy will create greater demand for maritime security capabilities and this, in turn, will trigger increased investment and growth in these capabilities. The enhanced and increasingly diverse role that maritime security will continue to play in the Blue Economy can be seen across all sectors in the IOR.

Wignaraja, G, Collins, A & Kannangara, P 2018, 'Is the Indian Ocean Economy a New Global Growth Pole?', Lakshman Kadirgamar Institute of International Relations and Strategic Studies.

The study aims to examine the economic outlooks of Indian Ocean economies, which are grouped into three sub-regions (Africa and Middle East; South Asia; and Asia and the Pacific), assess the initial conditions, and then predict near and medium-term outlooks. The inclusion of eight East Asian economies that are not IORA members makes it difficult for this study to be a reference point for IORA trade and investment analysis. Nonetheless, key findings include:

- • Container traffic through Indian Ocean ports has increased fourfold from just over 40 million TEUs in 2000 to more than 160 million TEUs in 2017 or equivalent to 22 per cent of global container traffic, although East Asian and Pacific ports still dominate global container traffic. Top Indian Ocean container ports are Singapore, Dubai and Port Klang in Malaysia. Going forward, the outlook for shipping in the region depends on the growth of internal markets, their engagement in trade, investment in port capacity, and the health of the global economy.

- Trade in IORA outperformed world trade growing at 9.4 per cent during 2000-2008 and 4.8 per cent during 2010-2017 accounting for 13.1 per cent of world trade in 2017. There are significant variations in the extent of engagement in intra-regional trade within the Indian Ocean. Southeast Asia and Australia account for 60 per cent of intra-regional trade. For South Asian, Middle Eastern and African states the majority of trade is with countries outside their sub-regions. This highlights that while intra-regional trade is significant for the Indian Ocean as a whole, this does not reflect strong trading links between all countries in the region.

- FDI flow into the region rose from US$44 billion in 2000 to US$239 billion in 2017, representing 17 per cent of total world FDI flow, driven by higher FDI inflows into East Asia and Pacific.

- Gaps in port infrastructure and custom procedures, represented by various indicators including WEF's GCI, WB's LPI, are major barriers to maritime trade. In addition, barriers to trade and investment remain high. Although import tariffs have declined significantly in recent years, NTBs prevail. In addition, there are considerably high restrictions to trade in services and investment (reflected by higher services trade restriction index).

- The existence of various sub-regional trade blocs and bilateral FTAs complicates the overlapping and diverse priority agendas. Limited powers delegated by members, lack of formal rules or legal structures, inadequate financial resources and lack of permanent secretariats are further complications.

Their key recommendations include:

- investing in port development and customs modernisation through national and mega-regional initiatives

- gradually reducing barriers to trade and investment

- setting up an Indian Ocean Development Fund to support LDC participation in trade-led growth and to facilitate knowledge transfers to middle income countries

- strengthening regional economic governance through appointing an Eminent Persons Group on IORA and linking sub-regional and bilateral FTAs to the RCEP.

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