



# Clearing the Runway for Intra-Asia Trade

Key insights for unleashing the  
potential for intra-Asia trade by 2030

Prepared for UPS®  
by AlphaBeta - Part of Access Partnership  
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# Preface

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This research was conducted by AlphaBeta and commissioned by UPS. It relies on third-party data and does not include any commercial information from UPS. All information in this report is derived or estimated by AlphaBeta analysis using both proprietary and publicly available information. UPS has not supplied any additional data, nor does it endorse any estimates made in the report. Where information has been obtained from third party or proprietary sources, this is clearly referenced in the footnotes. The report and maps included herein are without prejudice to the status of or sovereignty over any territory or boundary. In cases where China is referred, it predominantly refers to mainland China.

To better understand businesses' perspectives of current and future trends affecting trade in Asia, an exclusive survey was conducted for this report in January-February 2022. The survey respondents included 198 businesses located in 12 markets across Asia. The survey was disseminated through email and conducted via an online portal. Insights from the survey are featured and referenced throughout this report.

**AlphaBeta** (alphabeta.com) is a leading economic and strategy consulting practice with deep experience across a number of topics in the digital economy and the future of skills, sustainability, and economic development. AlphaBeta is part of **Access Partnership** (accesspartnership.com) – a global policy consulting firm, with integrated expertise across many areas including technology, government affairs, multilateral organisations, and sustainability.



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# Glossary of terms

Terms	Definition
<b>ADB</b>	Asian Development Bank
<b>ASEAN</b>	Association of Southeast Asian Nations, inclusive of 10 markets: Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam
<b>Asia-12</b>	The Asia-12 includes Australia, China, Hong Kong, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. For the purposes of this report, the terms Asia and Asia Pacific refer to and align with definitions in external sources and reports cited within this study.
<b>ATIGA</b>	ASEAN Trade in Goods Agreement
<b>BPO</b>	Business Process Outsourcing
<b>CPTPP</b>	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
<b>EPZ</b>	Export Processing Zones
<b>ESG</b>	Environmental, Social, and Governance
<b>FDI</b>	Foreign Direct Investment
<b>FTA</b>	Free Trade Agreements
<b>FTZ</b>	Free Trade Zones
<b>GDP</b>	Gross Domestic Product
<b>IM&amp;A</b>	Industrial Manufacturing and Automotive
<b>MSME</b>	Micro-, Small- and Medium-sized Enterprises
<b>RCEP</b>	Regional Comprehensive Economic Partnership
<b>SEZ</b>	Special Economic Zones
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>WTO</b>	World Trade Organization

# Foreword



## Michelle Ho

President, UPS Asia  
Pacific, Middle East  
and Africa

When UPS first expanded our express delivery services network to Asia in the late 1980s, we built the highways connecting the world's factories in Asia to markets in the US and Europe. We have known intimately well the growing importance of Asia to the global economy, and the depth of its integration with the rest of the world. But as the region transforms from being the world's production hub into a center for consumer demand in its own right, Asia's relationship with the world will change. Home to some of the world's largest trading hubs such as China, Japan, and Australia, and to dynamic regional markets with immense potential like Vietnam and Indonesia, Asia's influence on global trade will only increase in the coming years. In 2020, Asia's economy contributed more to the global GDP than any other region. The future of Asia is Asia, and we must be ready for it.

We thought it was important to quantify this intra-regional opportunity. Drawing on current literature, publicly available trade data, interviews with industry experts and an exclusive survey of trade industry stakeholders, this report finds that intra-Asia trade could double in value by 2030. The catch – if we as business and government do not do enough to collectively address policy and infrastructure gaps, we risk stagnation of intra-Asia trade instead.

The headwinds are considerable but not insurmountable. Asia's economies continue to grapple with COVID-19-related disruption to global supply chains, while the deeply interconnected nature of the global economy implies that conflicts in other regions can have far-reaching implications on Asian shores. Geopolitical tensions and territorial disputes have destabilised the trading of key product segments including food, electronics, and textiles to and from Asia. But despite these hurdles, Asia's growth prospects remain strong, and new trade deals such as the Regional Comprehensive Economic Partnership (RCEP) and continued efforts to dismantle the barriers to bilateral trade signify a bright future for trade within Asia.

Strong intra-Asia connectivity is not a given, and is particularly crucial for high growth segments such as high tech, retail, healthcare, and industrial manufacturing & automotive. Concerted action by governments and businesses around the region will be needed to build the intra-regional infrastructure, transportation networks, and facilitative trade policies required to make supply chains more resilient, ultimately steering us toward Asia's trade sector taking off by 2030.

At UPS, we have been supporting Asian governments, industry partners and our valued customers to navigate global trade for over 115 years. This report combines our expertise – and fresh insights – to explore opportunities and challenges in intra-Asia trade over the coming decade, and beyond. Whether you are a policymaker, business owner, or observer of trade policy, I hope you will draw valuable insights from this work and be inspired to work with us to pave the way toward an intra-Asia trade takeoff.

# Introduction



## **Dr. Fraser Thompson**

Principal, AlphaBeta –  
part of Access Partnership

Trade in Asia provides governments and businesses an incredible opportunity for sustained economic growth, despite the volatility of the pandemic years and other broad shifts in global supply chains. The biggest hindrance to unlocking these opportunities lies in the lack of robust, fact-based intelligence to inform stakeholders' decision-making. For instance, while bilateral trade data is widely available across international repositories such as the UN's Comtrade and International Trade Centre (ITC) databases, there is a lack of specific public insights on the key product segments and bilateral trade lanes that present the strongest potential. There is also a lack of focus on Asian insights in the existing literature, making it difficult to understand trade patterns within Asia or across its regional hubs. Additionally, analyses rarely quantify the impact of major trade deals or the impact of global economic drivers such as geopolitics, supply chain disruptions, digital innovations, and decarbonisation on the value of trade flows in Asia over the coming decade. Finally, the lack of a multistakeholder roadmap and its implications for business strategy has made it difficult to act on what insights have been available in the past.

This report aims to fill these key gaps by:

1. Providing updated analyses of key markets and segments for trade in Asia;
2. Quantifying the potential value of intra-Asia trade by 2030;
3. Identifying the major drivers that impact these projections;
4. Outlining which multistakeholder actions can best address the key barriers to trade;
5. Developing strategic takeaways for businesses trading in Asia.

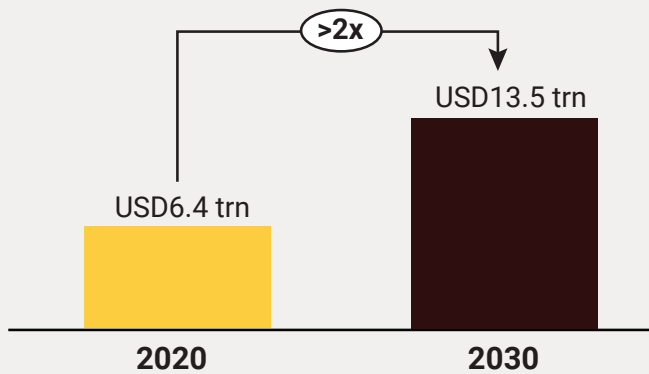
These insights are covered across three chapters: Chapter 1 outlines the opportunity, Chapter 2 outlines the risks which could stagnate intra-Asia trade, and Chapter 3 offers the key actions to mitigate these risks and unlock the opportunities. To assist business readers in navigating these insights, each chapter is also prefaced with the main takeaways for businesses.

AlphaBeta is proud to have worked closely with UPS to develop this report, and we hope that the insights presented will help guide policymakers and business leaders as they draw up the action plan to unlock the intra-Asia trade opportunity. We remain committed to assisting our industry partners in better understanding the economic forces shaping their markets in Asia, as they strategise for the future.

# Understanding the opportunities, risks, and action plan to capture the potential of intra-Asia trade in the coming decade and what this means for businesses

## Trade among the Asia-12 can take off and double by 2030...

### Intra-Asia-12 trade value in 2030<sup>1</sup>



Asia's economic importance to global trade will continue to rise within the next decade

Several trends are expected to lift Asia's trade:



Booming middle-class



Rapid urbanisation



Economic clusters



Rise in trade deals

### Four product segments

will be key to shaping trade flows for the 12 Asian markets:



Healthcare



Industrial manufacturing & automotive



Retail



High-tech

## ...but potential headwinds could cause stagnation instead

Businesses in Asia-12 identified six key barriers that hinder trade:



Tariffs and other punitive measures



Complex customs administration



Lack of harmonisation of standards



Shortage of labour & skills in the logistics industry

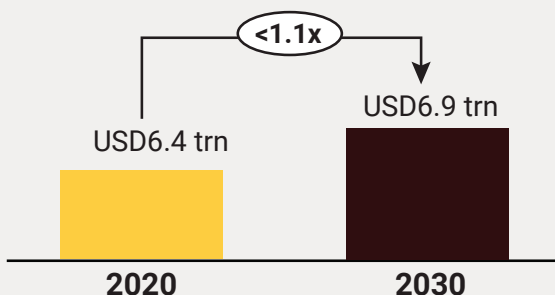


Lack of high-quality infrastructure



Poor engagement of micro-, small-, and medium-sized enterprises (MSMEs)

### Intra-Asia-12 trade value in 2030<sup>1</sup>



### Out of total trade among Asia-12 in 2020<sup>2</sup>

48% ↗

of value is vulnerable to headwinds

45% ↗

could be resilient and grow

8% ↘

may continue to decline regardless



Geopolitical disputes, supply chain shifts, and uneven investment in supply chains are key risks that give rise to these barriers



## Multistakeholder effort is needed to capture this opportunity

Stakeholders can collaborate on four key actions to mitigate trade barriers:

**01** Negotiate comprehensive trade deals



**03** Improve logistics serving intra-Asia trade



**02** Collaborate on harmonisation of product standards



**04** Build resilience into supply chains, including through innovation



Four strategic imperatives for businesses to capture trade growth in Asia:

**01** Plan for both opportunities and headwinds



**03** Digitalise comprehensively



**02** Partner with MSMEs to be integrated into supply chains



**04** Advocate for trade-supportive policies



1. Asia-12 includes Australia, China, Hong Kong, Indonesia, Japan, Malaysia, the Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam.  
2. Figures may not sum up to 100% due to rounding.



# Executive Summary

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## Intra-Asia trade could potentially double in value by 2030 from today's levels

**Asia is a critical component of global trade.** Over the past half century, Asia developed into the world's largest manufacturing hub. An exploding population eager to earn more, relatively cheap labour and materials, and deeper integration with global supply chains drove increased production of consumer goods, particularly those destined for the United States (US) and Europe. As a result, Asia is now critical to global trade flows, contributing 41% of global trade in 2020. However, as Asian markets become the global epicentre for new consumer demand, building off a sustained period of economic growth and improvements in standards of living, trade lanes within Asia are gaining importance. Already, two-thirds of Asia's contribution to global trade is attributable to intra-Asia trade.

**12 Asian markets (the "Asia-12") are critical to trade in Asia.<sup>1</sup>** The Asia-12 account for 88% of intra-Asia trade today, with China alone accounting for 30%, and emerging hubs such as Vietnam gaining prominence over the past decade. In sum, the value of intra-Asia-12 trade in 2020 amounted to a significant USD6.4 trillion, 34% of global trade today.

**The Asia-12 are poised to consolidate this position further, potentially doubling their trade to USD13.5 trillion in 2030.** In an exclusive survey conducted for this report, 57% of nearly 200 businesses in these markets believe that trade in Asia is likely to experience accelerated growth and 77% stated they were planning for this scenario.

**The Asia-12's strong economic fundamentals provide the platform for this growth in trade.** Future growth is underpinned by a booming middle class – with an estimated 567 million people joining this group by 2030, each demanding an increasing variety of goods per capita. Burgeoning urban areas will also drive a greater variety of traded goods, as 209 million people migrate to Asia-12 cities between 2020 and 2030. Ambitious trade deals are expected to broaden the scope of products covered under preferential agreements, digitally integrate customs processes, and mitigate potential geopolitical conflicts. Specialised economic zones are also expected to facilitate greater trade.

**Four key product segments are expected to fuel this growth.** Four segments have driven the surge in intra-Asia trade – (1) retail; (2) industrial manufacturing and automotive (IM&A); (3) high-tech; and (4) healthcare. These segments accounted for 75% of intra-Asia trade in 2020. The high-tech segment drove the biggest increase thanks to accelerated digitalisation, increasing by 4.4% annually between 2011 and 2020. During the pandemic, this segment proved resilient, growing by 5.2% between 2019 and 2020.

**Greater investments in supply chain innovation will build long-term resilience.** As of 2021, an estimated 60% of all manufacturing supply chain players have invested in technologies that could yield significant productivity improvements. In addition, more companies are investing in innovation testbeds to pilot tools such as delivery drones, paving the way toward cost reductions and productivity improvements. Public-private investment in new, high-quality logistics infrastructure, especially in air transportation, will also boost trade growth.

**To capitalise on these opportunities, businesses trading in the Asia-12 should pursue high-value and high-growth trade lanes.** China is likely to remain the fulcrum of intra-Asia trade. It is home to eight of the 10 most valuable trade lanes and four of the top five lanes by segment by 2030. Meanwhile, Indonesia and the Philippines could experience the strongest growth in the coming decade, particularly in the retail and IM&A sectors, as they develop their manufacturing hubs.

I. These 12 markets include Australia, China, Hong Kong, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam.

## In the face of significant headwinds, intra-Asia trade could also stagnate over the coming decade

**Intra-Asia trade holds significant potential, but there exists a number of barriers that, unless addressed, may stagnate trade within the Asia-12, suppressing its growth to USD6.9 trillion by 2030.** Businesses surveyed for this report indicated that there are six key barriers to greater trade in the Asia-12:

**01** Tariffs and other punitive measures



**02** Complex customs administration



**03** Lack of harmonisation of standards



**04** Shortage of labor & skills in the logistics industry



**05** Lack of high-quality infrastructure



**06** Poor engagement of micro-, small-, and medium-sized enterprises (MSMEs)



**Geopolitical tensions in the Asia-12 could intensify over the coming decade, with detrimental impact on trade.**

Geopolitical tensions that lead to trade disputes have historically introduced significant volatility in trade growth, particularly in the high-tech and retail segments. With ongoing conflicts in the East China Sea, Korean Peninsula

and South China Sea, as well as broader economic and political disputes between governments, progress in trade may be stymied.

**Supply chain shifts could expose labour, skills and infrastructure gaps in the Asia-12.** Shifts caused by COVID-19, the spread of automation and the growing focus on the environmental and social impact of trade outstrip the pace at which governments, businesses and the logistics industry can respond to these new challenges. This in turn contributes to reshoring (i.e., building domestic production capabilities for key products) or nearshoring (i.e., sourcing from markets closer to home) which could expose a shortage of labour and skills, as well as gaps in the domestic logistics infrastructure to handle increased demand.

**Uneven investment in supply chains and engagement of MSMEs could further restrict trade growth in the Asia-12.**

Progress on developing logistics infrastructure is uneven across Asia and could constrain future trade to well-developed markets. Additionally, MSMEs remain largely disconnected from supply chains and have poor access to international markets. The degree of digitalisation of MSMEs also varies significantly, affecting their ability to plug into digital channels like e-commerce.

**To mitigate these headwinds, businesses should diversify their supply chains into resilient trade lanes.**

Trade in healthcare over the coming decade may prove the most resilient, with 74% of its value today projected to grow in both scenarios presented in this report – and trade between China, Korea, and Japan could remain strong. Trade between China and ASEAN as well as intra-ASEAN trade in the high-tech segment could also prove resilient, outpacing the potential decline of value in other trade routes.

## Multistakeholder action can navigate these headwinds to unlock the 2030 opportunity, but businesses must prepare for both the opportunity and risks

**Multistakeholder action is required to reduce impediments to trade and harness the opportunities.** Action by businesses or government alone is not enough – active involvement by all stakeholders across the supply chain is key. Four key actions for governments and businesses are:

1. Negotiate comprehensive regional trade deals that remove remaining tariffs, harmonise standards, simplify customs, and promote MSME competitiveness
2. Collaborate on harmonising product standards by creating meaningful partnerships between business leaders, trade associations, certification bodies, and regulators
3. Improve logistics serving intra-Asia trade by developing infrastructure and skill roadmaps that match the economy's needs
4. Build resilience into supply chains via public-private investment and new solutions for businesses to navigate trade barriers and improve productivity

**Businesses with trade interests in Asia must proactively account for both the opportunity that intra-Asia trade presents, while building resilience against potential headwinds.**

Four key actions can help reorient them:

1. Plan for both opportunities and headwinds by capitalising on high-value and high-growth trade lanes in Asia but hedge against risks by diversifying into those with resilient growth prospects
2. Partner with and integrate MSMEs into regional supply chains to unlock mutual benefits
3. Digitalise comprehensively to respond faster to cross-border demand and adapt to paperless trade regimes
4. Advocate for trade-supportive policies via chambers of commerce and trade associations





01

**The intra-Asia trade  
opportunity is set to double**

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## Top 5 highlights for businesses

- 1 Intra-Asia trade could double by 2030, mainly driven by 12 key markets, together known as the Asia-12
- 2 A range of high-value and high-growth trade lanes will emerge over the next decade, with China, given its economic size and deeply integrated trade networks across the region, as the fulcrum of trade
- 3 Four product segments are fueling the growth, particularly high-tech, which is critical to ASEAN's growing digitalisation needs
- 4 Digitalisation will help businesses access new market opportunities driven by e-commerce and digital finance, while laying the foundations for paperless trade
- 5 Investing in supply chain upgrades will build resilience – particularly digital tools that enable supply chain tracking, improve product storage and delivery, and connect with air cargo and express facilities

## 1.1

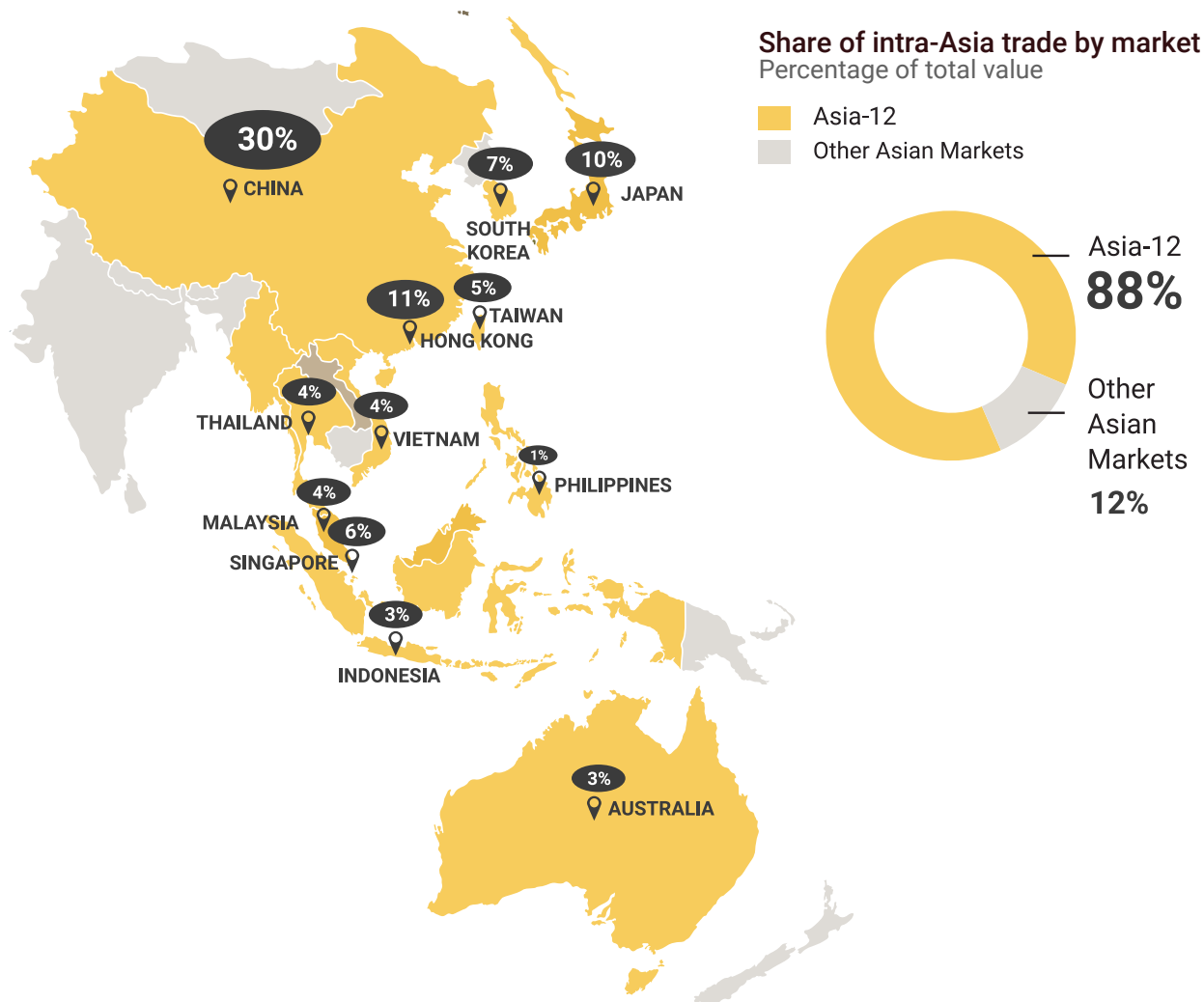
## Asia is critical to global trade flows, and the “Asia-12” have increased in importance to trade

**Asia is a critical component of global trade.** Over the past half-century, Asia has developed into the world’s largest manufacturing hub, supplying a range of global markets with manufactured consumer products, particularly the United States (US) and Europe.<sup>1</sup> An exploding population eager to earn more, relatively cheap labour and materials, and deeper integration with global supply chains drove this status, with the type of products supplied evolving from agricultural and lower-value manufacturing goods to a growing volume of higher-value electronics and professional business services. As a result, Asia now contributes 41% of global trade.

**Trade within Asia (i.e., intra-Asia trade) is gaining importance.** Asian markets are now transitioning from manufacturing hubs to the global epicentre for new consumer demand, building off a sustained period of economic growth and improvements in standards of living. The region became the world’s largest economy in 2019 when its economic output overtook Europe and North America. It then contributed 35% of global GDP in 2020, up by five percentage points from 2011. This economic success has been accompanied by the growing importance of trade lanes within Asia: already, two-thirds of Asia’s contribution to global trade are attributable to

### Exhibit 1

#### The Asia-12 drive 88% of intra-Asia trade, with China increasing its share over the past decade



SOURCE: ITC; AlphaBeta analysis



intra-Asia trade. Post-pandemic trade prospects remain strong in Asia, fueled by a steep incline in volumes traded and a recovery in price levels.<sup>2</sup> Asia's merchandise trade<sup>II</sup> also recovered faster than expected, having grown 19.1% year-on-year (YoY) by June 2021.<sup>3</sup> Both are underpinned by Asia's swift economic recovery; GDP growth is forecast to be 5.9% in 2022 (against 4.4% globally).<sup>4</sup>

**12 Asian markets (the "Asia-12") are critical to trade within Asia.** Trade in just 12 key markets accounts for 88% of intra-Asia trade today (Exhibit 1). These 12 markets include Australia, China, Hong Kong, Indonesia, Japan, Malaysia, the Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. China remains the focal point of intra-Asia trade, contributing 30% of trade within the region – an increase from 24% in 2011. Similarly, having doubled since the start of the decade, Vietnam's share of intra-Asia trade has also grown significantly, driven by deeper trade relationships across Asia. Most notably, Vietnam's

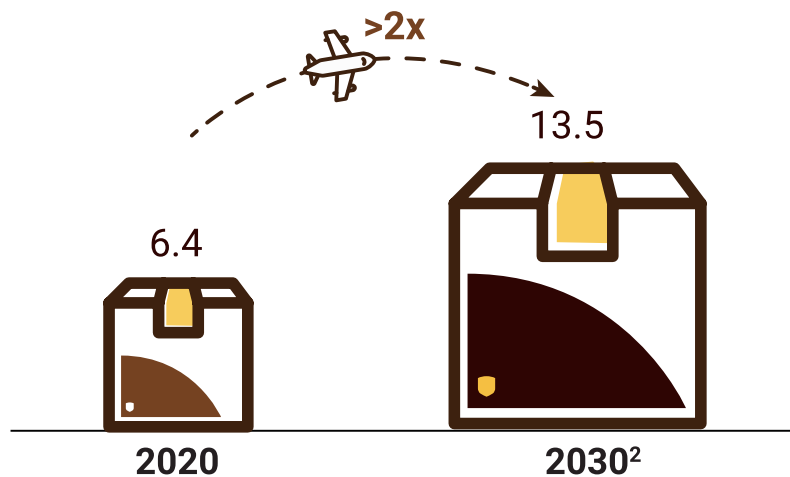
trade with China saw an average annual jump of 20.2% between 2011 to 2020. Japan and South Korea's share of intra-Asia trade, on the other hand, has declined over the same period.<sup>III</sup>

**The Asia-12 are poised to consolidate this position further, and trade within these 12 markets could more than double in value from USD6.4 trillion in 2020 to USD13.5 trillion in 2030 (Exhibit 2).** These estimates, coined as the "Asia take-off" scenario, are based on an analysis of the major drivers of trade in the coming decade that are detailed in the sections below. Businesses are already preparing for this rapid growth in intra-Asia trade. In a survey of nearly 200 trade-related businesses across the Asia-12 run exclusively for this report, 57% believe that growth in Asia's trade is likely to accelerate, of which 77% of this group stated they were already planning for this scenario.

## Exhibit 2

### Intra-Asia trade among 12 key economies could double to USD13.5 trillion by 2030 if governments and businesses capture available opportunities

**Intra-Asia-12 trade value<sup>1</sup>**  
USD trillions



1. The Asia-12 refers to 12 markets across Asia, which include six markets in the ASEAN region: Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam, along with Australia, China, Hong Kong, Japan, South Korea; and Taiwan. Values are estimated at constant 2020 prices.
  2. This estimate assumes favourable growth conditions for trade such as investment in supply chain innovations or rise in trade agreements. A full explanation can be found in the Appendix of this report. All estimates rely on a log-linear gravity model regression analysis and have been compared against other modelling approaches.
- SOURCE: ITC; AlphaBeta analysis

II. This refers to goods that add or subtract from the stock of material resources of a market through trade and does not include goods in transit.

III. For more details on past trade data and related analyses, please refer to the Appendix.

## 1.2

## The Asia-12's strong economic foundations provide the platform for greater trade

**Markets in the Asia-12 are poised to consolidate their trade prospects in the coming decade due to their strong economic foundations.** The region's rapidly growing middle class, burgeoning cities, ambitious trade deals, and economic specialisation bode well for greater trade.

### The Asia-12's growing middle class will spur greater demand than domestic production alone can satisfy.

Economic growth in the Asia-12 has created a vibrant consuming class who now demand a diverse variety of consumer goods and services. In these 12 markets alone, 567 million new entrants will be added to the middle-class (or consuming class) between 2020 and 2030, with the Asia-12's consuming class touching 1.5 billion people by the end of this period.<sup>v</sup> Of the total rise in Asia's consuming class, the Asia-12 will account roughly 38% of this increase – and 34% of the global rise – indicating that demand from these markets will likely drive a proportionally larger need for traded goods.<sup>5</sup> This clearly illustrates the sizeable opportunity for exports from the Asia-12 to the rest of the region over the coming decade.

### Supply chains that connect the Asia-12's burgeoning urban areas, including mega and middleweight cities,

**will encourage greater trade and innovation.** Cities have historically catalysed innovation in the goods supplied to external markets, as well as greater investment in transportation and logistics networks.<sup>6</sup> Asia-12 cities are already home to over 1.4 billion urbanites, with another 209 million expected to arrive between 2020 and 2030<sup>7</sup> – approximately 21 million per year. The fastest urban growth is generally occurring in “middleweight cities” (i.e., populations with one to five million), many of which are not yet prominent trade destinations. Greater connections between cities could lead to more integrated and specialised supply chains for high value electronics, machinery, and high-tech equipment. Across Asia, cities will swell by another 440 million in this decade, providing the Asia-12 with ever-growing opportunities to serve both existing and emerging trade hubs.

### Businesses should focus on markets participating in ambitious trade deals.

The Asia Pacific region currently contributes half of the world's preferential trade agreements<sup>8</sup>, including the ASEAN Trade in Goods Agreement (ATIGA)<sup>9</sup> and the China-Korea Free Trade Agreement (FTA).<sup>10</sup> Such trade agreements, especially amongst the Asia-12, have proven crucial in addressing

v. Middle-class refers to households with incomes between US\$10 and US\$100 per day per capita after accounting for purchasing power. Source: World Economic Forum (2020), “This chart shows the rise of the Asian Middle Class.” Available at: <https://www.weforum.org/agenda/2020/07/the-rise-of-the-asian-middle-class>



key barriers to trade while significantly boosting trade flows by removing tariffs, harmonising trade standards, and streamlining customs processes. Ambitious new trade deals such as the Regional Comprehensive Economic Partnership (RCEP), signed by 10 of the Asia-12, and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), signed by five of the Asia-12, are expected to further deepen trade links by broadening the scope of products included and facilitating easier customs clearance.<sup>11,12</sup>

#### **Key facts: Regional Comprehensive Economic Partnership (RCEP)**

- Signed by 10 of 12 Asia-12 markets
- First ever FTA between China, Japan, and Korea
- By eliminating 90% of tariffs between members, could boost exports by 2% or USD42 billion
- Provisions to boost capital allocation to underserved businesses

**Specialised economic zones are expected to facilitate greater trade and investment.** Asia is home to 75% of the world's specialised economic zones (SEZs), with China alone making up 47% of the total. These economic clusters are key to export promotion as they lower import duties and processing fees for goods traded within the zones. Many zones are located within the Asia-12 and provide a strong platform for future growth. For instance, SEZs in the Philippines already support over 60% of the economy's exports and are a major focus in national development strategies for many key export sectors. Economic zones also support greater digital connectivity, as demonstrated by Malaysia's Digital Free Trade Zone (DFTZ).<sup>13</sup> The DFTZ eServices platform is designed to boost e-commerce exports of local MSMEs by providing companies with consolidated information on customs processes and digital tools to navigate tariffs, standards, certifications, and shipping. These economic clusters also attract significant foreign investment. For example, Vietnam's SEZs have contributed around 70% of all foreign direct investment (FDI), while nearly 90% of total investment in Malaysia's SEZs originates from foreign investors<sup>14</sup>, reiterating that economic clusters are key to boosting trade in the region.



### 1.3 Four product segments are key to growth

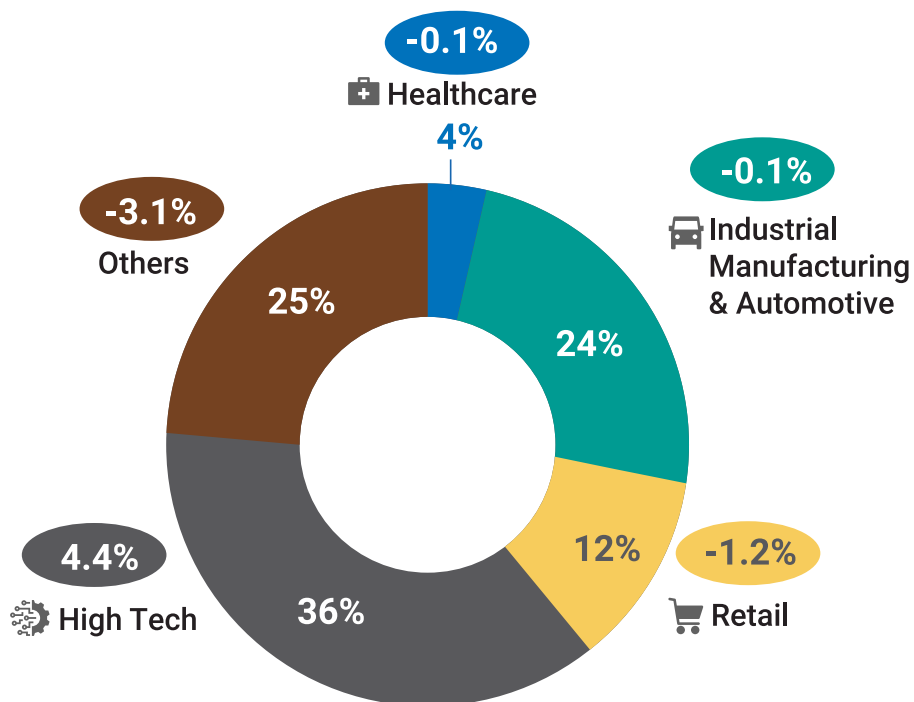
Four product segments drive intra-Asia trade today. Products in these categories account for 75% of today's intra-Asia trade value. They are largely of higher value and are usually traded via air transportation (Exhibit 3).<sup>VI</sup>

#### Exhibit 3

The four priority trade segments accounted for 75% of intra-Asia trade in 2020, with the high-tech sector contributing the highest share

##### Share of intra-Asia trade in 2020, by product segment

Percentage share of total value; Bubble: CAGR in value, 2011-20



**Healthcare:**  
 Medical devices, optical devices, and pharma/biopharma products (such as vaccines and pharmaceutical chemicals)

**Industrial Manufacturing and Automotive (IM&A):**  
 Tier 1–5 parts manufacturing, business-to-business (B2B) e-commerce, industrial machinery and assembly, and industrial components

**Retail:**  
 Apparel, consumer goods, jewellery and cosmetics manufacturing

**High-tech:**  
 Smart devices, work-from-home gadgets, semiconductors and constituting components

SOURCE: ITC; AlphaBeta analysis

VI. These comprise 46 of the 99 traded products as listed by the International Trade Commission at the Harmonized Standard (HS) second level. The detailed HS-2 codes considered under these segments can be found in the Appendix.

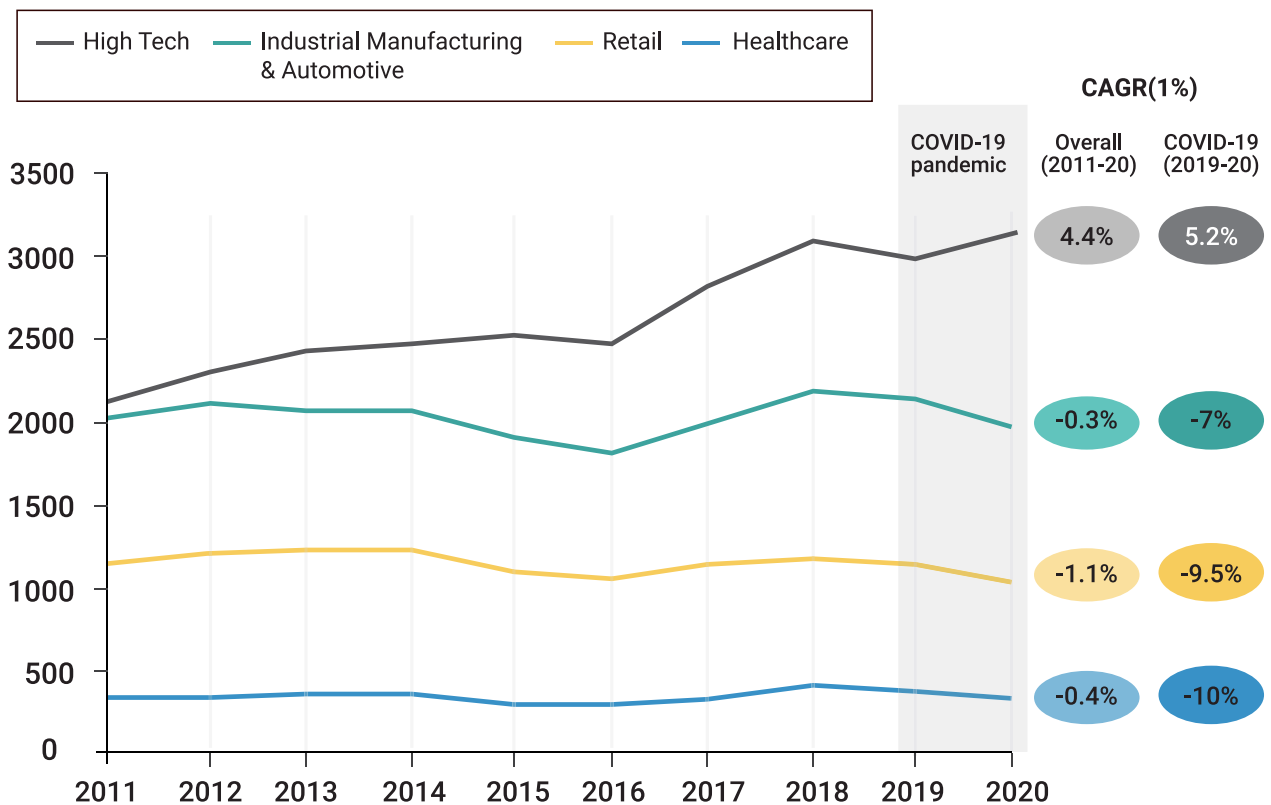
**The high-tech segment is expected to drive the largest share of growth in intra-Asia trade.** While trade in other segments dipped as a result of COVID-19, intra-Asia trade in the high-tech category flourished between 2011 and 2020, representing the largest share of goods traded at 36% and growing at 4.4% annually.<sup>VII</sup> A large portion of this trade comes from electrical machinery and equipment and related parts, which tend to be higher in value. Higher trade between China and the six ASEAN markets<sup>VIII</sup> that are part of the Asia-12 drove a large share of the sector’s growth, expanding by 9.6% on average each year between 2011 and 2020. High-tech trade also grew on average by 24%

annually between Vietnam and Japan as well as Vietnam and South Korea, as these markets partially substituted their lower trade with China in this category with greater trade with Vietnam. This segment also proved resilient when year-on-year (YoY) growth reached 5.2% in 2020, despite trade across all other categories dropping due to the impact of the pandemic (Exhibit 4). This is mainly explained by the acceleration of digital adoption by both businesses and consumers during COVID-19. Over the long-term, prospects are promising as these behavioural changes are likely permanent.<sup>15</sup>

**Exhibit 4**

**Intra-Asia trade in the three key segments dipped during the pandemic while high-tech proved resilient**

Trade value of four key segments within intra-Asia  
USD billions



SOURCE: ITC; AlphaBeta analysis

VII. With healthcare, it is noteworthy that while trade in pharmaceutical products rose by 9.7% between 2019 and 2020 in response to the global trade in COVID-19-related vaccines and medicines, organic chemicals, which contribute the largest proportion of healthcare trade, fell by 16% over the same period due to lower production as a result of reduced demand for fuels (where chemicals are produced as by-products). See IHS Markit (2020), "Trade outlook in the chemicals industry." Available at: <https://ihsmarkit.com/research-analysis/trade-outlook-in-the-chemicals-industry.html>

VIII. Refers to Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

**Strong outlook for the high-tech segment driven by rapid digitalisation across Asia.**

According to the World Bank's Digital Adoption Index (DAI)<sup>IX</sup>, the Asia-12 economies scored an average of 0.65 compared to the global average of 0.56. As an example, Indonesia has nearly doubled its digital adoption rate in recent years.<sup>16</sup> As digital technologies become ubiquitous, three key drivers are expected to promote increased trade in the high-tech segment:

- ▶ *Increased demand for manufacturing technology.* Digital technologies have the potential to maintain or uplift businesses and market competitiveness, leading to more efficient and cost-effective production. For example, robots are now commonly used across the entire manufacturing process in electronics<sup>17</sup>, which drove robot sales in electronics manufacturing to surpass those in the automotive industry back in 2021.<sup>18</sup>
- ▶ *Increased demand for consumer technology, driven by e-commerce.* Nearly 700 million additional people in Asia Pacific will join the Internet population by 2025.<sup>19</sup> As business and social interactions move online and consumer electronics and e-commerce become the norm, consumer/producer cross-market access will only strengthen. Additionally, e-commerce and online technologies are expected to support MSMEs that can produce goods locally and export them across the region.
- ▶ *Increased productivity across the economy.* As digitalisation spreads across the economy, not only is trade in the high-value manufacturing technology sector expected to increase, but in related categories as well. For instance, retail trade may improve as e-commerce grows, creating a virtuous cycle of greater investment in e-commerce, thus spurring further growth in retail. Retail trade between ASEAN and China increased 10.6% annually over the same period, reflecting the impact of e-commerce on retail trade between the two markets.



**Businesses should advocate for and leverage cross-border digital payment solutions to facilitate greater trade.**

To support trade growth in the high-tech and related segments, markets are also engaging in innovative digital trade agreements that facilitate the digital exchange of goods and services. Such collaborations help promote linkages and interoperability between payment networks, which lead to reduced time and compliance costs for businesses. The Digital Economy Partnership Agreement (DEPA) signed by Singapore, Chile and New Zealand is an example of such efforts – the agreement is expected to boost e-commerce by supporting cross-border digital payments.<sup>20</sup> Bilateral and regional agreements also help markets integrate their payment networks with one another, typically facilitating settlements in real-time.<sup>21</sup> One example is the Monetary Authority of Singapore and the Bank of Thailand's agreement to link their respective PayNow and PromptPay real-time payment transfer systems.<sup>22</sup> The agreement enables customers and businesses to conduct transactions digitally and skip various administrative tasks such as filling forms. This linkage will also underpin the ASEAN Payment Connectivity initiative, an ASEAN-wide payment integration effort that is currently under development.

IX. The World Bank's Digital Adoption Index (DAI) for businesses, with an index of 0 to 1, measures businesses' use of digital tools to increase productivity (with 1 being the highest). See World Bank (2016), *Digital Adoption Index*. Available at: <https://www.worldbank.org/en/publication/wdr2016/Digital-Adoption-Index>

## 1.4 Supply chain innovation and investment will also drive intra-Asia trade

**More than ever, businesses are likely to invest in supply chain innovation to build long-term resilience.** Asia's large and geographically diverse landscape requires firms to invest in innovations that can optimise their supply chains and help maintain competitiveness. The pandemic catalysed the adoption of digital tools that drove organisational efficiency and user convenience. As a result, 58% of Asia Pacific businesses are focused on increasing supply chain visibility through real-time tracking of their goods.<sup>23</sup> In another survey of supply chain professionals in ASEAN, nearly half believed their companies to be below average when it comes to using smart supply chain tools like radio-frequency identification tags (RFID) tracking, barcodes or automated warehouses.<sup>24</sup> As of 2021, an estimated 60% of all manufacturing supply chain players have invested in technologies that could yield significant productivity improvements. Meanwhile, even more companies are investing in innovation testbeds to pilot new tools such as delivery drones, paving the way for cost reductions and productivity improvements.<sup>25</sup> UPS opened its first innovation centre in Asia in 2021 to help accelerate the adoption of digital tools across supply chains. Initial pilots included partnering with customers to trial innovative warehousing technologies and provide hands-on testing to boost rapid development.<sup>26</sup> MSMEs have also signalled their intentions – a 2019 survey revealed that 81% of Asia-based MSMEs consider leveraging digital technologies as

a core part of their business and customer engagement strategies.<sup>27</sup>

**Businesses are also expected to leverage public-private investments in new, high-quality logistics infrastructure, particularly air transportation.** Demand for air freight has increased in Asia, with air logistics volumes in 2021 surpassing 2019 pre-COVID levels.<sup>28</sup> A study by the International Air Transport Association (IATA) estimates that a 1% improvement in air cargo connectivity can drive a 6% rise in trade, underlining the importance of such investments.<sup>29</sup> Businesses are also expecting such investments to boost trade – 82% of businesses surveyed for this report indicated that air transportation will become increasingly important to trade within Asia. Air logistics-related infrastructure enhancements are on the agenda for governments and air cargo players in most Asia-12 markets, especially in China and Southeast Asia. For instance, China's 14<sup>th</sup> five-year plan lays out a roadmap to comprehensively improve its transportation and logistics through better connectivity and use of smart technology, while major air cargo players both in China and from overseas are building larger fleets, expanded route networks, and stronger service infrastructure.<sup>30</sup> Indonesia, for instance, plans to invest US\$400 billion between 2020 and 2024 to improve its airports and associated power and mass transit infrastructure.<sup>31</sup>



## 1.5 High-value and high-growth trade lanes are key to capturing intra-Asia trade opportunities

**Businesses trading in the Asia-12 should identify high-value and high-growth trade lanes to optimise the intra-Asia trade opportunity.** High-value trade routes typically comprise access to a large market base and stable sources of high-quality inputs for higher-value manufacturing. In the scenario that trade doubles, China will likely remain at the center of intra-Asia trade; our analysis shows that eight out of the top 10 most valuable trade lanes by market could be with China. This also applies to product segments: all of the top three trade lanes in each product segment is expected to be with China (Exhibit 5). Despite an increased focus on domestic consumption, China's size and deeply integrated regional trade networks mean its role as a key trade partner will persist into the future.<sup>32</sup> Retail, for example, will benefit from China's economy-wide investment in e-commerce platforms that enable

overseas producers to tap into China's domestic network of suppliers and consumers.<sup>33</sup>

Fast-growth trade lanes, on the other hand, offer exporters an opportunity to explore new markets and even cement their position in future hubs. Trade with the Philippines and Indonesia may see exceptionally speedy growth as the two undergo intensive domestic growth, focus more on moving up the manufacturing value chain, and develop extensive economic partnerships.<sup>34</sup> The Philippines' commitment to enhancing electric vehicle production capabilities and its deeper economic integration with Australia will continue to fuel automotive trade, while Malaysian investments in the electronics sector will help accelerate its high-tech exports.<sup>35</sup>



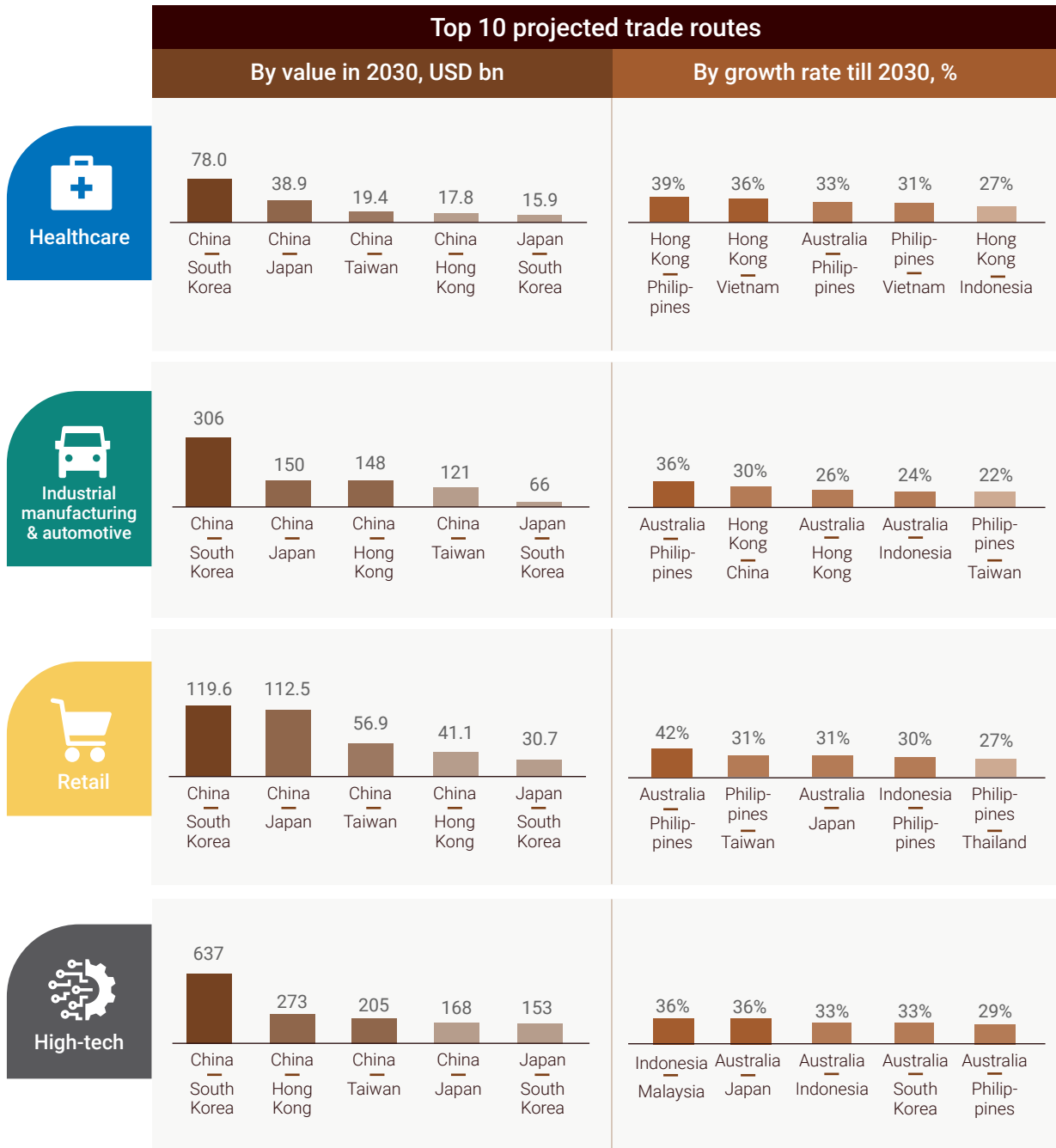


**Exhibit 5**

**While China may remain a key node across all four segments, other segment trade routes could potentially undergo rapid growth**

**Top 10 projected trade routes across priority segments, by value or by growth rate<sup>1</sup>**

USD billions and % annual growth rate (2020 to 2030)



1. Projections are based on an optimistic scenario of Asia's trade environment, as outlined in Chapter 1, where intra-Asia trade will take off and be driven by trends such as regional trade agreements, supply chain innovations, and rise in digitalisation. These projections should be taken as an ideal outcome rather than guidance.

SOURCE: ITC; AlphaBeta analysis

While this chapter highlights the opportunity for intra-Asia trade to double in value over the coming decade, significant headwinds could lead to a very different scenario. The next chapter explores these risks in greater detail.



02

## **The headwinds that could stagnate intra-Asia trade**

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## Top 5 highlights for businesses

- 1 If left unaddressed, existing gaps and barriers could stagnate intra-Asia trade; businesses should diversify their supply chains into resilient trade lanes to mitigate this risk
- 2 Geopolitical risks can create volatility in trade flows over the short-term, especially in the retail and high-tech segments; businesses should avoid being overly reliant on any particular trade lane
- 3 Supply chain shifts pose trade risks; products and supply chains must remain cost-competitive, sustainable and resilient to avoid losing out
- 4 Uneven investments in logistics infrastructure and a lack of high-skilled talent can make trade less attractive in certain markets; governments and the industry should work together to address these gaps
- 5 MSMEs are most susceptible when trade barriers intensify as a result of the high costs of compliance, low digitalisation, and lack of scale and diversification; governments and the industry should support their competitiveness

## 2.1 Intra-Asia trade could stagnate by 2030

**Despite the potential of intra-Asia trade, a range of barriers exist today that may intensify over the coming decade.** Businesses surveyed for this study revealed six major barriers as the most critical to address (Exhibit 6). While the impact of each varies by market, businesses across the Asia-12 identified trade tariffs as the biggest impediment to overall trade. For producers, tariffs significantly reduce profit margins and for consumers, they increase costs while limiting product availability.

In second place overall is the variance in product standards, certifications and labeling requirements for quality assurance and transparency purposes.<sup>36</sup> Varying standards and requirements impose significant compliance costs on exporters, as they then need to produce different products for different markets. This

particularly affects MSMEs that seek to expand their businesses overseas. The lack of operational scale and sales in different markets usually do not justify the time and monetary investments required to adapt to a new market.

Customs-related challenges ranked third overall, with businesses indicating that they are particularly detrimental in China, Indonesia, and Malaysia. Common challenges include paper-based administration, lengthy approval processes and complex product quotas which can cause costly delays or even rejection of shipments. COVID-19 further heightened the frustrations, as businesses faced frequent and lengthy delays due to manpower shortages and additional customs procedures.<sup>37</sup>

### Exhibit 6

#### Six key barriers hinder intra-Asia trade

Overall rank	Key impediments to trade	Average ranking of barrier by respondents in respective markets											
		AU	CN	HK	ID	JP	KR	MY	PH	SG	TW	TH	VN
1	Tariffs and other punitive measures	1	1	4	2	1	1	1	1	1	1	1	2
2	Lack of harmonisation of standards	6	3	1	4	2	2	3	3	6	2	2	1
3	Non-tariff barriers in the form of customs administration	5	2	5	1	4	5	2	5	2	6	5	4
4	Shortage of labour and skills in logistics industry	2	4	2	5	3	3	5	2	3	3	3	5
5	Lack of high-quality logistics infrastructure	3	5	6	3	5	4	4	4	4	4	4	3
6	Poor engagement of MSMEs in trade	4	6	3	6	6	6	6	6	5	5	6	6

SOURCE: Industry survey of 198 businesses that conduct trade in the Asia-12 economies; AlphaBeta analysis

These barriers may cause intra-Asia trade to stagnate over the coming decade. In such a case, trade within the Asia-12 would reach USD6.9 trillion by 2030 – only marginally higher than the USD6.4 trillion posted in 2020 (Exhibit 7). This translates to an annual growth of only 0.7% over the 10-year period. These estimates, coined as the “deglobalisation” scenario, are based on an analysis of

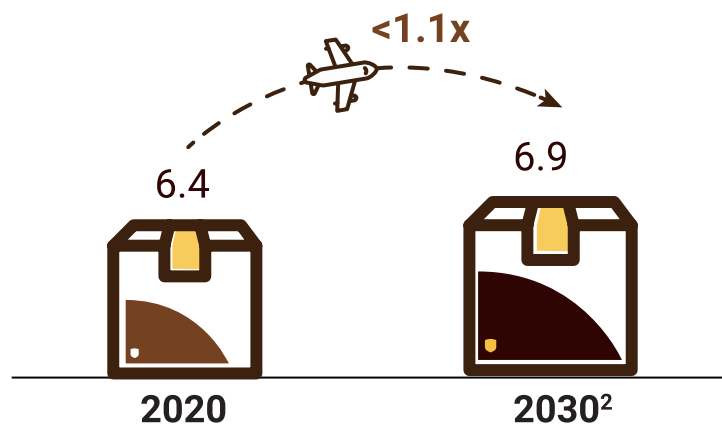
the major barriers to trade, which are typically deliberately instituted by governments or are the legacy of unaddressed policies due to geopolitical conflicts, supply chain shifts or uneven investment/digitalisation of supply chains. These drivers are explored in detail in the subsequent sections of this chapter.

## Exhibit 7

### Intra-Asia trade could stagnate to USD6.9 trillion by 2030 if trade headwinds are not addressed

#### Intra-Asia-12 trade value<sup>1</sup>

USD trillions



1. Values are estimated at constant 2020 prices.

2. This estimate assumes unfavourable growth conditions for trade such as prolonged economic shocks due to the COVID-19 crisis or a rise in geopolitical tensions. A full explanation can be found in the Appendix of this report. All estimates rely on a log-linear gravity model regression analysis and have been compared against other modelling approaches.

SOURCE: ITC; AlphaBeta analysis

## 2.2 Geopolitical conflicts could lead to costly trade disputes

**Businesses need to hedge against risks imposed by geopolitical tensions and diversify the markets in which they trade.** Asia may experience a rise in geopolitical struggles which could adversely impact trade, further exacerbating the region's top three barriers to trade (tariff barriers, complicated customs processes, and disincentivised harmonisation of products).

**Territorial disputes are a major geopolitical risk that could create short-term trade volatility.** The geographical area that comprises the Asia-12 consists of many contested land and sea territories. Dips in trade are especially significant in the years immediately following these conflicts, with the four key segments (covered in Chapter 1) being especially vulnerable. For instance, in the years following the Senkaku/Diaoyu Islands dispute (2012-14), bilateral trade in the four segments between China and Japan declined by 2.6% annually, compared

to a 1.1% decline between 2011 and 2020 (Exhibit 8), with retail and high-tech experiencing more pronounced declines. Unofficial boycotts of Japanese products by Chinese consumers were at the heart of this drop, with more than two-thirds joining the boycott in the beginning.<sup>38</sup> This dispute has likely contributed to the broader economic divergence between the two markets over the past years as this, and other issues, remain unresolved.<sup>39</sup> Other similar flashpoints are probable particularly in the South China Sea region and in the Korean peninsula.<sup>40</sup> The involvement of global superpowers like the US may also have both intentional and unintentional consequences.<sup>41</sup> The impact of conflicts elsewhere, including the war in Ukraine, could also impact the profitability of trade by raising costs, while creating uncertainty in trade routes in affected areas.

### Exhibit 8

#### Geopolitical tensions can lead to volatile trade in priority segments, particularly in high-tech and retail segments

■ Within 1pp deviation of 2011-2020 CAGR    ■ Larger than 1pp deviation of 2011-2020 CAGR

Trade relationships	Geopolitical event	Year of event (T)	Overall priority segments trade growth (CAGR)		Retail segment trade growth (CAGR)		High-tech segment trade growth (CAGR)	
			Year T to (T+2)	2011-20	Year T to (T+2)	2011-20	Year T to (T+2)	2011-20
China - Japan	Senkaku / Diaoyu islands dispute led to interrupted productions if trade relations broke down	2012	-2.6%	-1.1%	-5.7%	-3.6%	-1.1%	0.3%
China - Philippines	South China Sea dispute led to reduced trade passing through the sea	2016	7.6%	6.8%	-2.1%	10.6%	12%	6.2%
Australia - China	Trade tensions increased with the imposition of tariffs by China on Australian exports	2018	-4.7%	2.2%	-20.2%	2.1%	4.9%	5.7%

SOURCE: ITC; AlphaBeta analysis

**Broader economic and political disputes can hinder trade, particularly for MSMEs that do not have diversified market portfolios.**

The on-going US and China disputes over trade imbalances and global political influence continue to stir uncertainty between the two economies, with knock-on effects felt across the Asia-12. A range of retaliatory tariff measures have over the years led to reduced trade, prompting China to shift towards greater domestic production and consumption.<sup>42</sup> China now also trades more with Asian markets, and less with key US allies.<sup>43</sup> For instance, Australia's trade with China in priority segments decreased by 4.7% annually at the height of the US-China trade dispute (2018 to 2020), compared to a growth of 2.2% annually between 2011 and 2020. The retail and high-tech segments exhibited the highest volatility, with retail dropping 20.2% annually over this two-year spell.<sup>41</sup> Exporters in Asia may also face additional tariffs on certain product segments, especially those for whom China is a key supply chain partner.<sup>44</sup> If producers are forced to "choose" between supplying the US or China, those who have not yet diversified will have to suffer the financial costs of pivoting towards new markets, with MSMEs being the most susceptible to the circumstances.

**ASEAN's consensus-building and decision-making norms are stymying economic progress and cooperation.**

Despite deeper economic integration over the past few decades, trade remains hindered by members' reluctance to harmonise their standards and practices. For instance, while non-tariff barriers (NTBs) have been on the ASEAN bloc's agenda since 1977, they have not been explicitly mentioned in the ASEAN Trade in Goods Agreement (ATIGA). Across ASEAN, imported goods face many such measures: in Indonesia, the average imported machinery or electronics product often runs into six technical barriers, including pre-shipment inspections, product authorisations, product labelling, package marking, importer registration, product registration and traceability requirements.<sup>45</sup> Complex product standards equally pose challenges, with Filipino exporters expected to absorb the

high costs of securing potentially redundant certificates for food and automotive products,<sup>46</sup> while automobile imports in Vietnam remain subjected to licensing fees and inspections, drastically bumping up car prices.<sup>47</sup>

Attempts to solve these challenges, including the ASEAN Single Window (ASW), ASEAN Harmonised Tariff Nomenclature (AHTN), and capacity building for customs authorities hold significant promise, but lack urgency in implementation. There is a strong risk that faster-moving trends including supply chain shifts and geopolitical developments may compel trade within ASEAN to stagnate as a result, while also constraining the broader potential of trade with other Asian markets. Previous attempts to address trade barriers urgently in ASEAN have been successful, particularly those that use the "pathfinder" approach that pilot new systems in a few markets at first. An example is the ASEAN Customs Transit System (ACTS), a digital customs transit management tool that aggregates customs clearance requirements across markets to one formality for products crossing multiple land borders.<sup>48</sup> This was first rolled out in Malaysia, Thailand and Singapore, and upon its success it was made available across relevant markets in the region in late 2020.

**Domestic protectionism presents another intensifying geopolitical challenge.**

Policies that encourage domestic production at the expense of imports are expected to become more prevalent over time, as markets recover from the pandemic years and veer towards building resilience domestically. A key example is Indonesia's import restrictions designed to favour domestic suppliers.<sup>49</sup> Equally onerous are Malaysia's show-stopping excise duties of 75-105% on new energy vehicles (ie., hybrid or battery-powered vehicles).<sup>50</sup> Another instance is Japan's government-led initiative to relocate their brands' manufacturing operations from China to Southeast Asia or back to Japan.<sup>51</sup>

X. Meanwhile, the US has diversified its supply chains to reduce its dependency on China, notably spurring greater trade with Vietnam.

XI. Notably, the commodities trade proved more resilient, given China's reliance on Australia for materials such as iron ore. Hence, while bilateral trade in priority segments declined in the years after 2018, overall trade remained positive at 4.2% growth annually.

## 2.3

**Supply chain shifts could expose labour, skill, and infrastructure gaps**

**Emerging trends are shifting the locus of Asian supply chains closer to home markets, pressuring products to be cost-competitive and sustainably produced, and supply chains to stay resilient.** Shifts caused by COVID-19, rapid digitalisation, and a growing emphasis on the environmental and social impacts of trade are outstripping the pace at which governments, businesses and the logistics industry can respond to these challenges. This, in turn, contributes to reshoring (i.e., building domestic production capabilities for key products) or nearshoring (i.e., sourcing from markets closer to home), thereby exposing a shortage in labour, skills and capacity of the domestic logistics infrastructure.<sup>52</sup>

**The impact of COVID-19 restrictions on cross-border logistics and workforce activity exposed vulnerabilities in trade and encouraged companies to source products domestically.** In the survey conducted for this study, 53% of businesses indicated that the crisis had materially impacted their business and supply chains. Air cargo capacity, for instance, declined by as much as 80% in some locations over 2020-21.<sup>53</sup> In response, governments and organisations reoriented their supply chains to rely more on products sourced closer to their domestic markets in hope of mitigating disruptions over the near future. Two-thirds of Asian businesses surveyed by the Asian Development Bank (ADB) intend to source more goods locally – prioritising nearshoring instead of relying on complex global value chains that are prone to such external shocks.<sup>54</sup> Smaller enterprises were hardest hit, with cash flow shortages and difficulties in sourcing raw materials as the most common challenges among MSMEs in Asia.<sup>55</sup> It must be noted, however, that the pandemic also induced trade facilitation measures in some markets, such as the adoption of digital tools for paperless trade administration. Undertaken by many markets in Asia Pacific since the beginning of the pandemic, such measures can have a lasting positive impact on trade costs.<sup>56</sup> Paperless trade, for instance, can cut average trade costs by 13%.<sup>57</sup>

**The negative externalities of global trade and consumer products in general are pressuring companies to source products sustainably and/or locally.** Companies are increasingly expected to comply with ethical and sustainable standards of production, affecting how companies produce and transport goods. A global PwC survey reveals that many consumers prefer companies that stand up for environmental (80% of respondents), social (76%) and governance commitments (80%).<sup>58</sup> At

the same time, 61% of businesses surveyed for this report believe that such asks, including the pressure to reduce emissions, localise supply chains and ensure ethical production will invariably cause significant disruptions to trade in Asia. Such measures, while undoubtedly essential to long-term sustainability, directly impact trade flows. To achieve both objectives, the ecosystem can adopt carbon credits, which have been touted as key to combating supply chain emissions especially in the air transportation industry. The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) scheme aims to achieve carbon-neutral growth among all international flights by 2035 through carbon credits issuance and can serve as a model for other industries.<sup>59</sup> Major players such as UPS have also developed delivery options such as the Carbon Neutral Programme, which offers senders the opportunity to offset the climate impact of shipments through investments in independently verified carbon offset projects, including reforestation, landfill gas destruction, wastewater treatment, and methane destruction.<sup>60</sup>

**Advances in robotics and automation could shorten supply chains.** Automation presents a risk to trade in certain product categories, particularly finished products. Businesses can significantly reduce production costs by deploying automation to boost output per worker by up to 30%, thereby reducing the need to purchase these products from markets with low-cost labour and incentivising production in home markets.<sup>61</sup> A study by BCG indicates that the growth in advanced robotics installations will accelerate from 2-3% annually in the past decade to 10% in the coming decade, driven by lower costs, making up approximately 40% of manufacturing tasks performed by robots globally.<sup>62</sup> Manufacturing industries expect to see a 35% rise in “reshoring” for every robot installed per 100 workers.<sup>63</sup>

**Robotics and automation are creating skill gaps in the logistics industry.** A large and skilled talent base may ensure efficient trade networks and smooth-running ports and cargo terminals today, but new automation technologies require new skills and capabilities.<sup>64</sup> Skill and labour gaps are becoming apparent across the Asia-12, with survey respondents in eight of the 12 markets reporting that labour and skill shortages are a key barrier to trade (Exhibit 6). While many Asia-12 governments recognise this shortage and have industry-level plans that include national skills development frameworks, there still exists headroom to equip workers with the necessary technical training.



## 2.4

## Uneven investment in supply chains and engagement of MSMEs further restricts trade

### Progress on logistics infrastructure is uneven, requiring industry and businesses to address these gaps together.

High-quality logistics infrastructure is essential to trade. It enables the fast and efficient movement of goods across borders, at minimum product loss. It also allows for markets to be integrated into the global value chain. While the Asia-12 have continuously invested in logistics infrastructure, infrastructure quality across markets remains uneven, particularly in markets such as Indonesia and Vietnam. This is corroborated by rankings across the World Bank's Logistics Performance Index (LPI).<sup>65</sup> Plans to integrate transport networks into regional initiatives have also faced roadblocks. For instance, China's plans to build rail links into Southeast Asia (increasingly referred to as the "Pan-Asia Railway Network") have suffered delays, most recently including the connection to Thailand which is affected by the deteriorating ties and diverging priorities of the two markets.<sup>66</sup> It will be up to governments to implement industry-wide policies, to invest in and to develop the necessary logistics infrastructure, especially in seaports, airports and road networks. AlphaBeta estimates show that the logistics and transport infrastructure financing gap could be worth US\$138 billion annually across Asia Pacific between 2020 and 2030 in private sector investment alone, and potentially three times higher if including public sector investment, too.<sup>67</sup>

### Finally, the uneven engagement of MSMEs represents an untapped opportunity.

MSMEs are the backbone of the Asian economy. On average, they comprise 97% of all enterprises and employ 69% of the national labour force.<sup>68</sup> There is a significant opportunity for MSMEs to capitalise on emerging export opportunities and engage with other overseas businesses in Asia, integrating them within regional supply chains. There are mutual benefits for larger companies to encourage MSME participation in trade – from strengthening their own supply chains and creating greater collective bargaining power to advocating for trade-supportive policies. While MSMEs in the Asia-12 receive support through national industry and trade policies, the efficacy of policies is uneven within the group, with disparities observed even among ASEAN markets. For instance, MSMEs account for 29% of total export values in Thailand, while in Indonesia, they make up only 14.4%.<sup>69</sup> This disparity is potentially caused by two factors. The first is the relatively high degree of compliance costs faced by MSMEs compared to larger organisations, especially when it comes to complying with varying trade rules, product standards, complex customs procedures and understanding the product tariff categories.<sup>70</sup> The second is the degree to which MSMEs are digitalised across economies, which affects their ability to plug into regional and global supply chains through online channels like e-commerce.



## 2.5

## Businesses can mitigate risks by diversifying their supply chains into resilient trade lanes

**Businesses should continue diversifying their supply chains to build resilience against the potential headwinds of intra-Asia trade.** The COVID-19 crisis has exposed the vulnerabilities of concentrating supply chains in a few markets, especially when goods and people movements are restricted. Diversification enhances their resilience in the long run and also provides businesses opportunities to better serve customers. Within ASEAN, especially during the pandemic, companies in sectors ranging from medical technology to electronics diversified their manufacturing supply chains, moving away from single sources and closer to end markets.<sup>71</sup> Overall, locating businesses and operations in only a few places may not be favourable if supply chain shifts materialise,<sup>72</sup> which may explain why 57% of Asian businesses surveyed by the ADB stated that they planned to diversify their supplier base post-pandemic.<sup>73</sup>

The analysis presented in this report across the “Asia take-off” and “Deglobalisation” scenarios in Chapter 1 and in this chapter reveals the “resilient” trade routes that are more likely to enjoy growth under either scenario (Exhibit 9).<sup>xii</sup> Businesses can consider investing in these trade lanes

across major segments to hedge against potential risks. Trade in healthcare over the coming decade may prove the most resilient, with 74% of its value today projected to grow in both scenarios – and trade between China, Korea, and Japan could remain strong in this segment despite headwinds. Trade in the IM&A sector may prove most “sensitive” with 53% of its value today potentially declining in a deglobalisation scenario, with trade between China, and partners such as Korea, Vietnam, and Indonesia remaining resilient. The high-tech segment appears to be most susceptible to headwinds, with 43% of its value today expected to decline across both scenarios by 2030 and only 28% remaining resilient. However, this does not mean that even in Deglobalisation, trade will contract in value. It simply means that high-tech trade will be concentrated in other trade routes, such as those with China, Indonesia, and Malaysia across the Asia-12, where growth could outpace the decline of value in other trade routes. At the same time, ASEAN markets may slowly move toward intra-ASEAN trade for electronics production, boosting the sector’s trade value by 2030.<sup>74</sup>

XII. “Resilient” trade routes will grow in both scenarios; “Sensitive” only in the “Asia take-off” scenario while declining in the “Deglobalisation” scenario; and “Decline” could potentially decline in both scenarios. The value assigned to each of these categories is the share of that trade value in 2020 and not representative of 2030 values, i.e., the 74% of trade value today in the healthcare sector that is “resilient” and will grow in both scenarios will grow by 2030 in value as well as in share of the segment total.

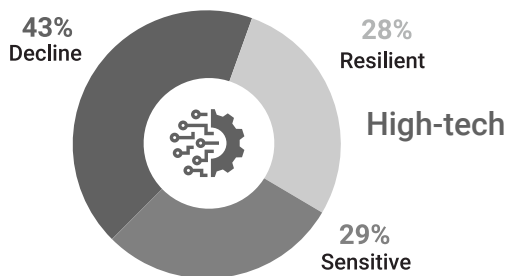
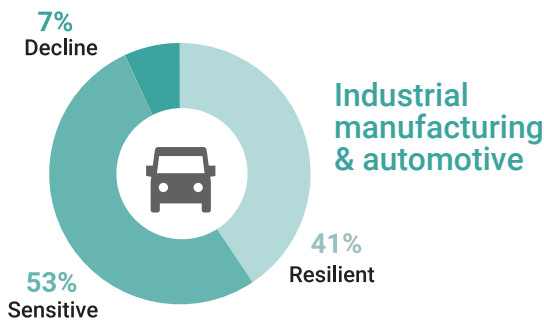
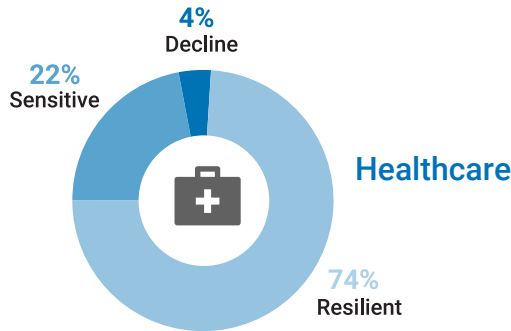


**Exhibit 9**

**Healthcare goods may potentially be the most resilient and could grow in both optimistic and worst-case scenarios, followed by retail**

**Share of intra-Asia-12 trade sensitive to geopolitical shocks, by segments<sup>1</sup>**

Share of each priority segment trade value in 2020 (%)



**Top 5 resilient trade routes by value**

1. China – Korea
2. China – Japan
3. China – Taiwan
4. Japan – Korea
5. China – Thailand

1. China – Korea
2. China – Taiwan
3. China – Vietnam
4. Japan – Korea
5. China – Indonesia

1. China – Japan
2. China – Korea
3. Japan – Korea
4. China – Taiwan
5. China – Thailand

1. China – Korea
2. China – Japan
3. Malaysia – Singapore
4. Korea – Taiwan
5. Japan – Korea

1. Each figure represents a share of trade value in 2020 that is forecasted to be under either the resilient, sensitive, or decline category in 2030. Resilient trade refers to trade routes that may expect positive growth in either Asia take-off or Deglobalisation scenarios, while sensitive trade refers to trade routes that may see positive growth only within the Asia take-off scenario. Declining trade refers to trade routes that may see slight contractions regardless of which scenario plays out.

SOURCE: ITC; AlphaBeta analysis

This chapter presents key trade barriers and associated risks that must be mitigated to unlock the potential for intra-Asia trade presented in Chapter 1. The following chapter explores how governments and businesses can mitigate these risks in greater detail.



03

## **Capturing the intra-Asia trade opportunity**

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## Top 5 highlights for businesses

- 1 Participate in multistakeholder efforts to address trade barriers, including advocating for trade supportive policies via chambers of commerce and trade associations
- 2 Plan for both opportunities and headwinds; capitalise on high-value and high-growth trade lanes but hedge against risks by diversifying into those with resilient growth prospects
- 3 Larger businesses should partner with and promote deep integration with MSMEs to unlock mutual benefits
- 4 Digitalise comprehensively to take advantage of new sales channels and adapt to paperless trade regimes
- 5 Contribute to the planning and execution of national roadmaps and innovative supply chain models to help guide investment and upskill talent

### 3.1 Multistakeholder action across four key areas will be crucial to success

**Multistakeholder action will reduce impediments to trade and harness the opportunities to steer intra-Asia trade towards take-off.** Action by businesses or government alone is not enough to address the key barriers to trade – active involvement by all stakeholders across the supply chain is imperative. There are four key actions that government and industry can together champion, each with varying relevance to the six barriers of trade.



#### Negotiate comprehensive trade deals

Regional trade deals negotiated by Asia-12 governments should look to address four key aspects: the removal of remaining product tariffs, agreeing on common product standards across all segments, creating provisions that help businesses meet customs requirements, and promoting MSME participation in trade. For trade agreements to be effective, they must be considered binding to all participants and be comprehensive enough to prevent disputes later on.

#### Impact of action on barriers

■ Direct ■ Indirect ■ Negligible

 Tariffs and other punitive measures	Direct
 Lack of harmonisation of standards	Direct
 Complex customs administration	Direct
 Shortage of labour and skills in the logistics industry	Negligible
 Lack of high-quality logistics infrastructure	Indirect
 Poor engagement of MSMEs in trade	Direct

Trade associations and other industry bodies can assist in these discussions by highlighting specific issues and helping to identify win-win solutions. The Australia-China FTA, for example, commits both governments to reducing unnecessary customs procedures through the adoption of WTO provisions and by clearly outlining timelines for implementation.<sup>75</sup> To prevent individual economies from blocking the progress of multiple markets, approval processes of trade agreements should be time-bound and operate on a majoritarian or clause-by-clause voting system.

Broad-based trade agreements should also offer businesses assistance in meeting regulatory requirements. For example, businesses could be required to incorporate a minimum value of inputs or processes from member economies of the trade agreements (known as regional value content) before they can enjoy tariff waivers. The Regional Comprehensive Economic Partnership's (RCEP) cumulative rules of origin provision enables businesses to easily meet this criterion by adding the costs of their inputs cumulatively, as long as they originate from participating economies.

The RCEP also includes a number of provisions to align customs procedures, impose consistent and transparent administration, expedite clearance of goods for member economies and eliminate pre-shipment inspections for tariff classification and customs valuation.<sup>76</sup> Finally, it lays out the frameworks that promote the participation of and investment in MSMEs through greater sharing of information on trade and investment opportunities to these enterprises.<sup>77</sup>

Innovative new trade deals such as Singapore and the UK's recent Digital Economy Agreement (DEA) further provide a blueprint to facilitate seamless end-to-end digital trade through common and interoperable digital systems for e-invoicing, e-signatures, and other documents such as bills of lading.<sup>78</sup> In short, paperless administration should be the end objective.

02



Impact of action on barriers

Direct Indirect Negligible

Tariffs and other punitive measures	Negligible
Lack of harmonisation of standards	Direct
Complex customs administration	Indirect
Shortage of labour and skills in the logistics industry	Negligible
Lack of high-quality logistics infrastructure	Indirect
Poor engagement of MSMEs in trade	Indirect

**Collaborate on harmonisation of product standards**

Both governments and businesses have a critical role to play in harmonising product standards and ensuring its application is transparent and consistent. To facilitate this, meaningful partnerships and collaborations between business leaders, trade associations, certification bodies and governments must be nurtured to address gaps in current standards regimes. As an example, government agency Enterprise Singapore partnered with industry trade association Singapore Manufacturing Federation (SMF) to set up the SMF-Standards Development Organisation, an institution that manages and implements standardisations across biomedical and health, food, and general manufacturing products.<sup>79</sup>

Governments should also actively push for the harmonisation of regional and international standards through economic bodies such as ASEAN.<sup>80</sup> International standards are useful benchmarks to raise the quality of goods while simultaneously making it easier for goods to be traded beyond the Asia-12.<sup>81</sup> Meanwhile, industry associations and certification bodies can come together to develop common product standards, like the way Food Industry Asia (FIA) harmonised food safety regulations and halal certification standards across the region. Recently, they published guidelines for healthier food formulations in Indonesia,<sup>82</sup> which were consolidated onto an easy-access portal for everyone across the region to work towards.

03



Impact of action on barriers

Direct Indirect Negligible

Tariffs and other punitive measures	Negligible
Lack of harmonisation of standards	Indirect
Complex customs administration	Indirect
Shortage of labour and skills in the logistics industry	Direct
Lack of high-quality logistics infrastructure	Direct
Poor engagement of MSMEs in trade	Direct

**Improve logistics serving intra-Asia trade lanes**

Logistics industry roadmaps can help improve the logistics infrastructure that facilitate cross-border trade within Asia and encourage businesses and individuals to make investment and upskilling decisions that align with the economy’s needs. Public sector investments, for instance, can be guided towards ensuring that the logistics sector improves at a good pace. Australia’s National Freight and Supply Chain Strategy is a key example of such a national strategy – provisions were made for investing in smarter multimodal logistics infrastructure, which improved efficiency and enabled better planning and better fund tracking.<sup>83</sup>

National roadmaps can provide direction to stakeholders across the ecosystem, including MSMEs. Malaysia’s Logistics and Trade Facilitation Masterplan outlines five strategic outcomes and 21 actions to help improve the overall productivity of the logistics industry, including an online platform that helps MSMEs engage in e-commerce and manage freight operators virtually.<sup>84</sup>

To ensure a steady flow of talent that meets the industry’s evolving demands, national logistics roadmaps should include skills training programmes like the Philippine Skills Framework for Supply Chain and Logistics where key skills of each specialised role in the logistics industry are outlined.<sup>85</sup>

Likewise, digital economy and logistics sector businesses can help address labour shortages by providing webinars, classes and certifications to help supply chain professionals upskill. By collaborating with governments, logistics players can play an instrumental role in creating industry-wide skills frameworks, as with Singapore’s Skills Framework for Logistics which was developed in consultation with industry.<sup>86</sup>

04



#### Impact of action on barriers

■ Direct
 ■ Indirect
 ■ Negligible

<b>Tariffs and other punitive measures</b>	
<b>Lack of harmonisation of standards</b>	
<b>Complex customs administration</b>	
<b>Shortage of labour and skills in the logistics industry</b>	
<b>Lack of high-quality logistics infrastructure</b>	
<b>Poor engagement of MSMEs in trade</b>	

### Build resilience into supply chains, including through innovation

Coordinated investment in Asian supply chains can improve the efficiency and productivity of existing logistics infrastructure and build resilience. Public and institutional investment will remain a critical component of infrastructure finance, as demonstrated by the Indonesia Investment Authority, which recently invested USD7.5 billion in DP World, a solutions provider offering digital tools such as real-time monitoring and automated cargo stacking technologies to modernise the economy's maritime infrastructure.<sup>87</sup>

Key players in the logistics sector could also develop solutions to help businesses navigate trade barriers. This includes UPS's TradeAbility® platform, which provides businesses with free online tools to navigate international shipping regulations and compliance, including those that help estimate shipping costs, identify restricted entities, access market-specific customs data and documentation, and prepare paperless invoices.<sup>88</sup> Continuous development and innovation of key trade nodes like ports and roads will also help markets navigate shocks in supply and demand when they arise. Investment in smart ports offers economies a way to tackle congestion or under-capacity through automated port management, so port operators can detect and troubleshoot problems in real-time.<sup>89</sup> Such systems enhance resilience by protecting port operations from supply chain bottlenecks and allow port operators to recover quickly after periods of low demand.





## 3.2 Moving forward, business strategies must account for trade opportunities and risks

**Businesses with trade interests in Asia and those in the logistics sector must proactively account for both the opportunity that intra-Asia trade presents in the coming decade, while also building resilience against potential headwinds.** The four key implications for business strategy are:

01



### Plan for both opportunities and headwinds

Businesses' trade strategies in Asia should account for the possibility that both doubling and stagnation scenarios could play out, although the real outcome is likely to be somewhere in the middle. Trade portfolios should reflect this reality by having a mix of both high-value and high-growth trade lanes (as outlined in Chapter 1) while hedging against potential headwinds by diversifying into trade lanes with resilient growth prospects (as outlined in Chapter 2). Efforts should be made to ensure portfolios are responsive to changes in the trade landscape – for instance, partnerships between smaller and larger businesses can help reduce switching costs when supplying different markets, while advocacy for trade-supportive policies can help proactively avoid potential risks.

02



### Partner with and promote deep integration of MSMEs into regional supply chains

Larger businesses can provide MSMEs greater access to trade through their supply chains and by adapting their digital tools. Digital services like delivery and e-commerce platforms, for example, can facilitate digital adoption among these firms through skilling initiatives.<sup>90</sup> A good example is the National Champion Programmes, comprising initiatives that identify and provide support to successful and fast growing MSMEs in emerging markets. Through such programmes, larger companies can support MSMEs by providing expertise, access to larger clients, sharing industry trends or even investing in them.<sup>91</sup> Creating a vibrant industry ecosystem that support MSMEs will contribute to the resilience of larger firms, as they will have a wider variety of services and suppliers to engage. Inversely, MSMEs will become integrated with global value chain links through these large firms, boosting revenue and export opportunities all around.

03



### Digitalise comprehensively

Businesses in both critical export sectors and the logistics industry can significantly improve their trade prospects by digitalising their operations. For export sectors, using digital identities, digital documentation and real-time product tracking can significantly reduce compliance costs and prepare them for a future paperless trade administration. MSMEs can also significantly benefit from taking their operations online and accessing a broader range of customers through e-commerce platforms, making them more resilient than solely offline counterparts.<sup>92</sup> For the logistics industry, investing in testbeds or innovation centers and partnering with technology companies to pilot new tools and develop new infrastructure can unlock supply chain productivity gains for years to come. As digital adoption accelerates in Asia and around the world, it is becoming imperative for the logistics sector to not only digitalise but to continuously evolve, innovate, and stay at the forefront of technology.

04



### **Advocate for trade-supportive policies**

Companies can rally together to promote a trade-friendly environment through collective engagement with governments and multilateral organisations that facilitate trade deals. Chambers of commerce and trade associations are examples of platforms where the industry can discuss the latest trends and bottlenecks with policymakers. As an example, the China-ASEAN Business Council promotes dialogue about trade issues among businesses and governments, and even ran an initiative during COVID-19 to promote communication among governmental entities and formulate business responses on continued trade cooperation.<sup>93</sup> By highlighting the potential of trade and its opportunities, companies can motivate governments to keep the flow of goods and services open while reducing uncertainty.

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Multistakeholder action is critical if businesses in the region are to capture the rich intra-Asia trade opportunity. Policymakers and businesses should come together to develop a comprehensive trade roadmap to enable their markets to flourish. The insights outlined in this report provide fertile ground for discussion and for decision makers to act on to support the region's economic growth.



# Appendix

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# Appendix: Detailed approach

*This section provides a detailed methodology on the assumptions and sources of information used in this research.*

## A.1. Data sources

The estimates for trade presented in this report primarily draw on analyses of data sourced from the International Trade Center (ITC), corroborated by data from the UN Comtrade databases, together with data from the World Bank, International Monetary Fund (IMF), and UN Department for Economic and Social Affairs (UNDESA). The table below provides an overview of the data used.

**Table A1**

Database	Source	Scope of data	Time period	Comments
<b>ITC Trade Map<sup>94</sup></b>	ITC	Bilateral goods trade data between Asia-12 markets by individual HS codes at the 2-digit level	2011-2020	The ITC database has the most comprehensive set of bilateral trade data by HS codes for the Asia-12 markets, with data largely referenced from UN Comtrade. It was selected as it is the only database with bilateral trade data available for Taiwan.
<b>World Development Indicators<sup>95</sup></b>	World Bank	Macroeconomic indicators for the Asia-12 including GDP, GDP per capita, labour force, etc.	2011-2020	These indicators were used as assumptions and inputs for future projections
<b>World Economic Outlook<sup>96</sup></b>	IMF	Real GDP and GDP growth forecasts for the Asia-12	2021-26, estimations made based on these for 2030	
<b>UNDP Population Database<sup>97</sup></b>	UNDP	Population estimates and forecasts for the Asia-12	2020, 2030	
<b>World Urbanization Prospects<sup>98</sup></b>	UN Population Division, UNDESA	Urban Population estimates and forecasts for the Asia-12	2020, 2030	
<b>Presence of bilateral trade agreements</b>	Various sources from a literature review	Bilateral agreements between Asia-12 members	2022	Trade and industry ministries across the Asia-12 markets publicly list trade pact agreements that the economies participate in
<b>Distances between markets</b>	LatLong.net (2020)	Distance in kilometres between Asia-12 members	2022	A single source was used to ensure points of origin for each economy are standardised – as calculation of distance between two latitude-longitude coordinate points differ between different databases

## A2. Product codes

The Harmonised System (HS) codes outlined in Table A2 were identified to be relevant to the four priority segments as part of this study's scope.<sup>99</sup> Product labels are based on the international HS categorisation.

**Table A2**

Segment	Product HS code	Product label
Healthcare	'28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes
	'29	Organic chemicals
	'30	Pharmaceutical products
	'9018	Instruments and appliances used in medical, surgical, dental or veterinary sciences
	'9022	Apparatus based on the use of X-rays or of alpha, beta or gamma radiations, whether or not for medical, surgical, dental or veterinary uses
High-tech	'85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles
	'90	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus; parts and accessories thereof
	'8486	Machines and apparatus of a kind used solely or principally for the manufacture of semiconductor boules or wafers, semiconductor devices, electronic integrated circuits or flat panel displays
Retail	'50	Silk
	'51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric
	'52	Cotton
	'53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn
	'54	Man-made filaments; strip and the like of man-made textile materials
	'55	Man-made staple fibres
	'56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof
	'57	Carpets and other textile floor coverings
	'58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery
	'59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use
	'60	Knitted or crocheted fabrics
	'61	Articles of apparel and clothing accessories, knitted or crocheted
	'62	Articles of apparel and clothing accessories, not knitted or crocheted
	'63	Other made-up textile articles; sets; worn clothing and worn textile articles; rags
	'64	Footwear, gaiters and the like; parts of such articles
'65	Headgear and parts thereof	
'66	Umbrellas, sun umbrellas, walking sticks, seat-sticks, whips, riding-crops and parts thereof	
'67	Prepared feathers and down and articles made of feathers or of down; artificial flowers	

Segment	Product HS code	Product label
<b>Retail</b>	'69	Ceramic products
	'70	Glass and glassware
	'71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin
	'72	Iron and steel
	'95	Toys, games and sports requisites; parts and accessories thereof
<b>Industrial manufacturing and automotive</b>	'39	Plastics and articles thereof
	'40	Rubber and articles thereof
	'49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans
	'73	Articles of iron or steel
	'74	Copper and articles thereof
	'75	Nickel and articles thereof
	'76	Aluminium and articles thereof
	'78	Lead and articles thereof
	'79	Zinc and articles thereof
	'80	Tin and articles thereof
	'81	Other base metals; cermets; articles thereof
	'82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof of base metal
	'83	Miscellaneous articles of base metal
	'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof
	'86	Railway or tramway locomotives, rolling stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electromechanical) traffic signalling equipment of all kinds
'87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	
'88	Aircraft, spacecraft, and parts thereof	
'89	Ships, boats and floating structures	

### A3. The Asia-12

The markets covered in this research are presented in Exhibit A1.

#### Exhibit A1

#### The “Asia-12”: Markets covered in this research



### A4. Survey data

To better understand businesses' perspectives of current and future trends affecting trade in Asia, an exclusive survey was conducted for this report in January-February 2022. The survey respondents included 198 businesses located in and with trade interests across the Asia-12 markets, mostly in industries producing the priority segments identified in this study as well as those in the logistics industry. The survey was disseminated through email and conducted via an online portal. Table A3 below shows the market breakdown of the survey respondents.

Table A3

No. of respondents	AU	CN	HK	ID	JP	KR	MY	PH	SG	TW	TH	VN
	12	39	6	10	26	21	14	10	6	22	10	21

Additionally, there were a total of 45 respondents from the retail sector, 74 respondents from the IM&A sector, 23 respondents from the high-tech sector and 32 respondents from the healthcare sector. The rest of the respondents fall under other sectors.

Key survey questions covered the following topics:

- Trade growth in Asia over the past five years and during the pandemic
- Likelihood of future trade scenarios in 2030 (e.g., Asia take-off, Deglobalisation)
- Company preparedness for future trade scenarios in 2030
- Ranking of greatest barriers to trade
- Opinions regarding major trends, including impact of COVID-19, importance of air transportation, China's importance to trade, sustainability risks, and rise of near-to-market manufacturing

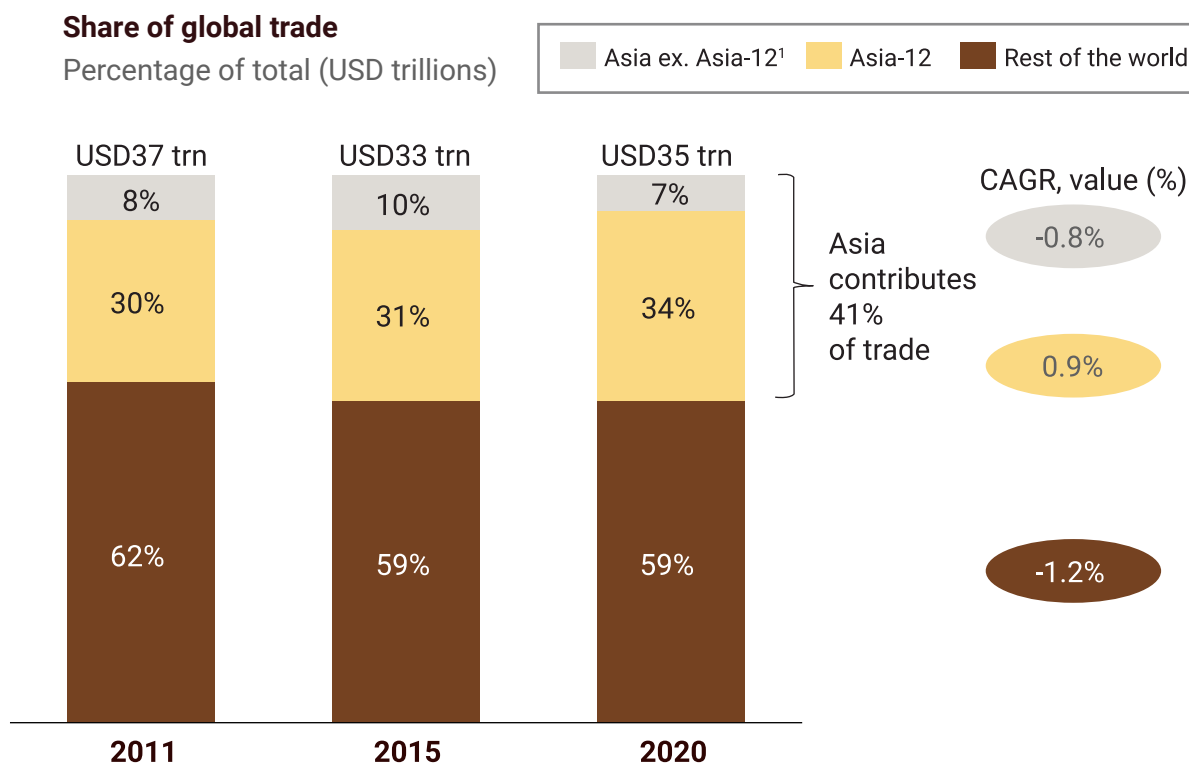
## A5. Historical data analysis

In this section, we outline some additional insights from the data analysed in this research.

Exhibits A2 and A3 below provide more detailed insights on the evolution of trade in Asia over the past decade.

### Exhibit A2

#### Asia now makes up 41% of global trade, with the Asia-12 contributing to 34% of global trade



1. The Asia-12 include six markets in the ASEAN region: Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam; along with Australia, China, Hong Kong, Japan, South Korea, and Taiwan.  
SOURCE: ITC; AlphaBeta analysis

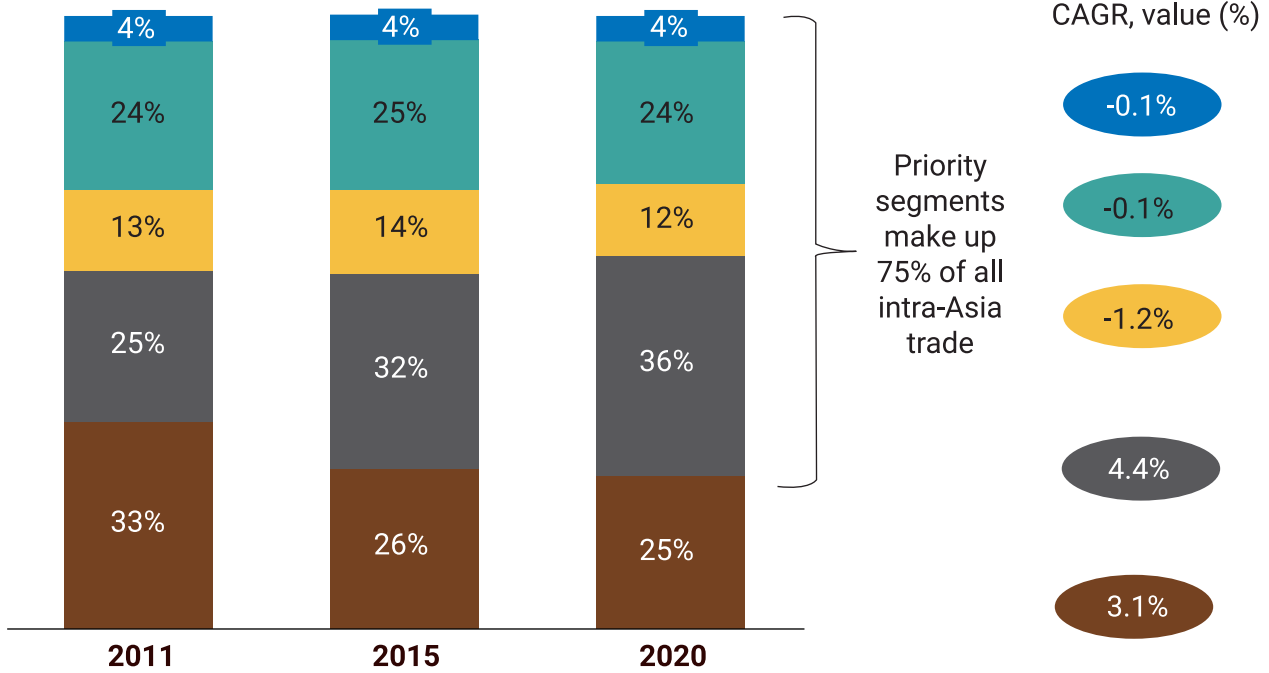


**Exhibit A3**

The priority trade segments account for 75% of intra-Asia trade in 2020, up from 67% in 2011, with the high-tech sector displaying strong growth

**Share of global trade**

Percentage of total (USD trillions)



SOURCE: ITC; AlphaBeta analysis

**Exhibit A4****The Asia-12 drive 88% of intra-Asia trade, with China maintaining the largest share****Share of total value of intra-Asia trade**

Percentage of total

Markets	2011	2015	2020
Australia	4%	3%	3%
China	24%	28%	30%
Hong Kong	9%	11%	11%
Indonesia	3%	3%	3%
Japan	13%	10%	10%
Korea	9%	8%	7%
Malaysia	4%	4%	4%
Philippines	1%	1%	1%
Singapore	7%	6%	6%
Thailand	4%	4%	4%
Taiwan	5%	5%	5%
Vietnam	2%	3%	4%
<b>Total-Asia-12</b>	<b>85%</b>	<b>86%</b>	<b>88%</b>

**Contribution to intra-Asia Trade**

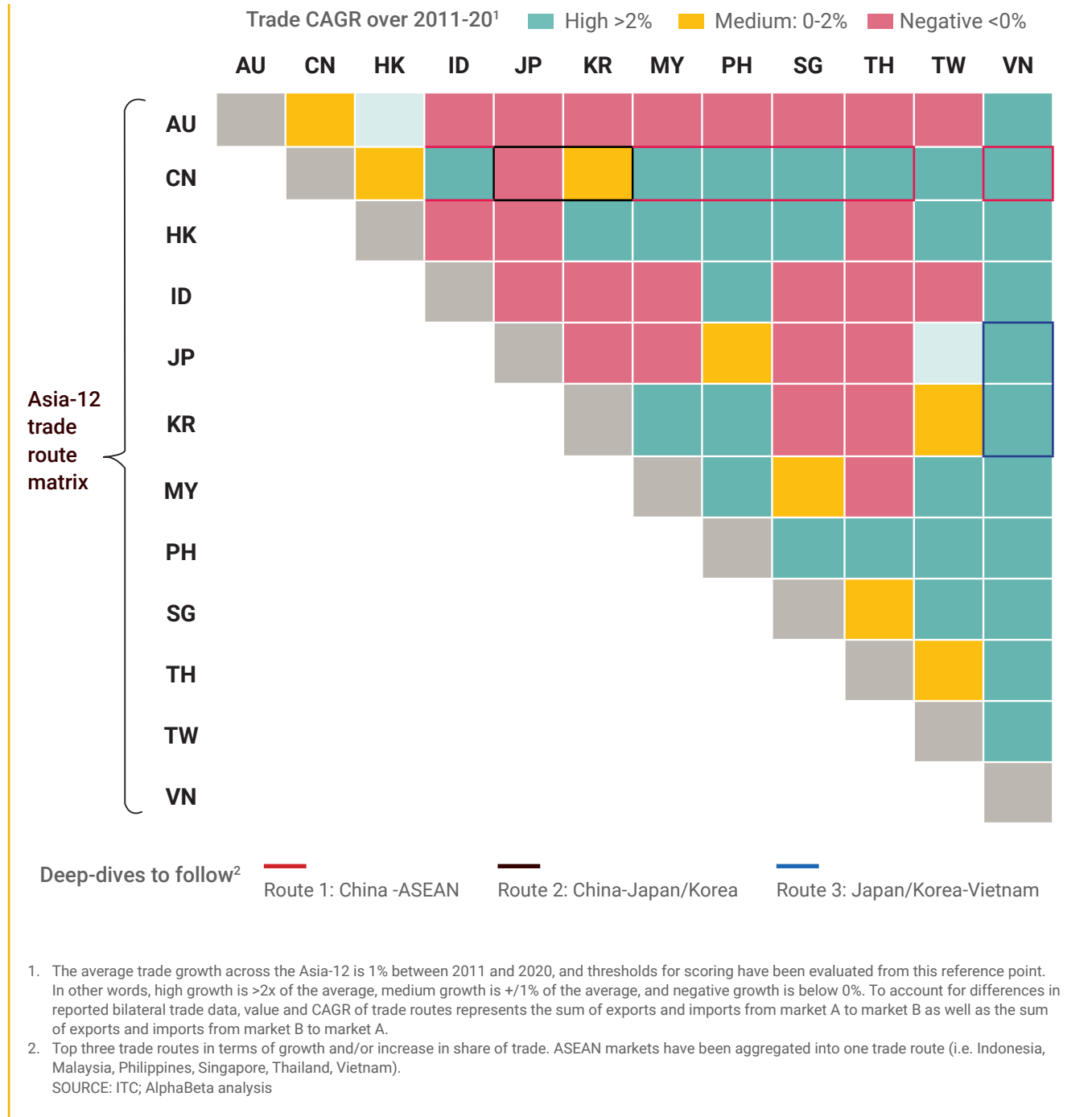
● More than 2 percentage points increase    ● More than 2 percentage points decrease

SOURCE: ITC; AlphaBeta analysis

Within the Asia-12, three trade lanes experienced the most significant shifts: 1) China-ASEAN, 2) China-Japan/Korea, and 3) Vietnam-Japan/Korea (Exhibit A5).

**Exhibit A5**

**There are three trade routes which experienced significant shifts over the past decade for priority segments: China-ASEAN, China-Japan/Korea and Japan/Korea-Vietnam**



**China-ASEAN.** The China-ASEAN trade lane has expanded significantly over the past decade and is the second fastest growing trade lane amongst the Asia-12. While China has been ASEAN's largest trading partner since 2009,<sup>100</sup> the reverse – ASEAN as China's largest trading partner – only materialised when it overtook the European Union in 2020.<sup>102</sup> The concentration of trade with China, measured using the share of China's trade out of the market's total trade with Asia-12, accelerated across every ASEAN market, following the region's trade dependency on China.<sup>xiii</sup> Growth of this trade lane can largely be attributed to increased trade across the board between China and Vietnam, especially in the high-tech and retail segments. Of the six ASEAN markets in this study (Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam), trade between China and Vietnam saw the biggest jump (USD223 billion) with 20.2% growth in CAGR from 2011 to 2020. High-tech trade makes up 58% of the surge in China-ASEAN trade, expanding 9.6% annually over the same period. Meanwhile, despite retail trade declining overall from 2011 to 2020, trade between ASEAN and China increased 10.6% annually over the same period, reflecting the significance of e-commerce and the ensuing retail trade between the two regions.

**Vietnam-Japan/Korea.** While Vietnam constitutes a small share of intra-Asia trade, Vietnam's trade with Japan and South Korea shows enormous potential, as evidenced by its growing volume of imports from both markets. For instance, trade growth in the high-tech segment reached 24% annually from 2011 to 2020, contributing 75% of the hike in cargo moving from Japan and South Korea to Vietnam. Trade between Vietnam and these two markets has also grown in the other three priority segments as well, despite these other segments experiencing an overall decline at the intra-Asia level over the same period. Additionally, this was the only trade lane to experience significant growth in the healthcare segment, posting 5.8% annual growth between 2011 to 2020.

**China-Japan/Korea.** China's trade with Japan and South Korea declined between 2011 and 2020. Amongst China's total trade with the Asia-12, the two markets' share declined from 42% in 2011 to 33% in 2020. Of the four priority segments, IM&A contributed the most to this decline, with the value in trade falling by four percentage points between 2011 and 2020. Trade in healthcare and retail also fell by 1.8% and 3.1% annually, respectively.

## A6. Future forecast analysis

To analyse the impact of drivers behind the opportunities and risks influencing intra-Asia trade over the coming decade, we consolidated these drivers into nine "megatrends" and constructed three scenarios to account for their varying impact – Deglobalisation, A multi-polar world, and Asia take-off (Exhibit A6). The "multi-polar world" scenario was not reported as this represents a "business-as-usual" continuation of trade and expected impact of these megatrends, and the other two scenarios were presented as lower and upper bounds for the growth of the value of trade in the Asia-12.

XIII. The Herfindahl-Hirschman Index (HHI) is an index typically used to measure market concentration in a market. A higher HHI implies higher market concentration (and hence lower diversity). A HHI figure of 1 indicates a full market concentration of one trading partner (World Bank, n.d.).

## Exhibit A5

There are three trade routes which experienced significant shifts over the past decade for priority segments: China-ASEAN, China-Japan/Korea and Japan/Korea-Vietnam

Impact of megatrend on future value of trade in each scenario: ■ Positive ■ Negative ■ Neutral

Megatrends		Deglobalisation	A Multi-Polar World	Asia take-off
<b>01</b>	<b>Growth in the consuming middle-class</b>	Growth in consumer population does not impact trade in a deglobalisation scenario	A rise in consumer population will contribute to economic recovery and growth	Expansion of middle class in Asia will fuel demand for intra-Asia trade
<b>02</b>	<b>Increasing urbanisation</b>	Growth in urban population does not impact trade in a deglobalisation scenario	A growing urban population and area promotes growth in trade of high-tech and retail goods	Rapid adoption of modern infrastructure and growth in commerce promotes trade
<b>03</b>	<b>Rise in trade agreements</b>	Trade agreements falter in an environment where markets deglobalise	Ambitious trade deals such as RCEP boost trade within Asia	More markets join regional trade pacts and innovative digital trade agreements increase
<b>04</b>	<b>Development of economic clusters</b>	Economic zones become ineffective as markets restrict trade	More economic zones and free trade areas attract FDI across the region	Niche and novel trade zones (such as digital free trade zones) appear, boosting growth
<b>05</b>	<b>Digital transformation</b>	Digitalisation disproportionately induces near-shoring	Businesses and governments adopt digital tools to uplift trade	Rapid adoption of technologies among consumers and firms boosts trade in high-tech goods
<b>06</b>	<b>Rise in geopolitical conflicts</b>	Markets enact stricter trade regimes to protect their own economies	Governments continue to push for localisation of production	Markets commit to free-trade and reduce trade conflicts
<b>07</b>	<b>Shocks created by the COVID-19 crisis</b>	Trade restrictions and near-shoring strategies continue	Uneven recovery while trade slowly picks up	Trade facilitation measures boost trade beyond business-as-usual
<b>08</b>	<b>Pressures on environmental and social impact of trade</b>	Markets restrict imports of goods linked to negative externalities	Firms enforce sustainable and socially acceptable sourcing, shortening supply chains	Deep intra-regional integration allows firms and governments to coordinate ESG initiatives
<b>09</b>	<b>Supply chain innovations</b>	Impact of supply-side innovations will be minimal in the face of trade restrictions	Innovations will continue to optimise operations across firms	Technologies will uplift productivity and smoothen supply chains

SOURCE:Literature review; AlphaBeta analysis

Trade forecasts in this report utilise the gravity model of trade, an econometrics model that estimates the value of trade between partners that is directly proportionate to each partner's level of GDP and inversely proportionate to their distance. Additional factors such as GDP per capita, presence of trade agreements, and whether markets share common borders can also be accounted for through the model. As a standard, intuitive, and efficient trade model, the gravity equation has been widely adopted by many institutions in analysis of the trade values. The UNCTAD's primer on the gravity equation provides further details on how the model has been developed.<sup>102</sup> For this analysis, the following log-linear equation has been used:

$$Trade_{ij} = \log GDP_i + \log GDP_j + \log GDP \text{ per capita}_i + \log GDP \text{ per capita}_j + Distance_{ij} + Bilateral \text{ agreement}_{ij} + Regional \text{ agreement}_{ij} + Common \text{ borders}_{ij} + c$$

Where:

Trade<sub>ij</sub> refers to trade between partners i and j, GDP refers to the GDP of the economy i or j, GDP per capita refers to GDP values in per capita terms (to account for population differences) and Distance<sub>ij</sub> refers to the distance between partners i and j. Bilateral agreement<sub>ij</sub>, Regional agreement<sub>ij</sub> and Common borders<sub>ij</sub> are dummy variables that refer to the presence of bilateral and regional agreements, and the presence of a common border between partners i and j. To estimate the value of each variable's coefficient, the linear regression was conducted across all the Asia-12 markets for total trade values and each segment's trade value for the years 2011 to 2020.

To project the future value of trade for each trade route, each economy's GDP has been forecasted based on current GDP trends and the impacts of megatrends and trade scenarios. The impact of the nine megatrends covered previously on the growth trajectory of each economy's GDP and value of trade were analysed across the three scenarios. To account for these three possibilities, each megatrend's impact has been augmented by a simple percentage proportion to incorporate how each scenario determines each trend's impact. Table A4 below explains how each megatrend has been incorporated into the GDP forecasts and trade projections.

The outcomes of the three scenarios will be contrasting, as covered earlier in Chapters 1 and 2 of this report and summarised in Exhibit A6.

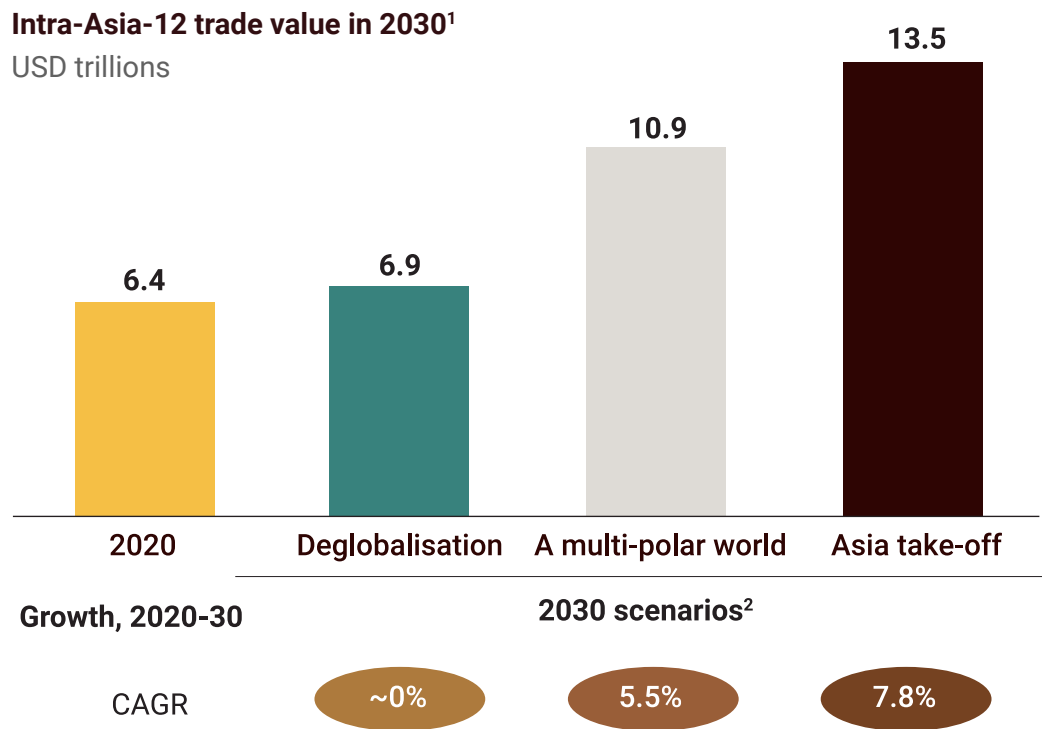
**Table A4**

Megatrends		Deglobalisation	A Multi-Polar World	Asia take-off
<b>01</b>	<b>Rise in middle-class and consumer population</b> The IMF's GDP growth trajectory for each economy already accounts for the change in demographics across economies, thus no exogenous effect has been introduced.	Exogenous change has been accounted for by the IMF's GDP growth forecast.	Exogenous change has been accounted for by the IMF's GDP growth forecast.	Exogenous change has been accounted for by the IMF's GDP growth forecast.
<b>02</b>	<b>Increasing urbanisation</b> The IMF's GDP growth trajectory for each economy already accounts for the short- and long-term impacts of COVID-19, thus no exogenous effect has been introduced.	Exogenous change has been accounted for by the IMF's GDP growth forecast.	Exogenous change has been accounted for by the IMF's GDP growth forecast.	Exogenous change has been accounted for by the IMF's GDP growth forecast.
<b>03</b>	<b>Rise in trade agreements</b> For this megatrend, the impact of large trade deals such as CPTPP and RCEP on GDP growth was used as a proxy to reflect the rise in trade agreements.	In this scenario, trade agreements are assumed to falter as jurisdictions retreat to their borders.	In this scenario, trade agreements (e.g. RCEP or CPTPP) are assumed to bring about some benefit to all the Asia-12, but as key jurisdictions such as China or India continue to sit out, the impact will be minimal and would be reflected by IMF's forecasts.	All jurisdictions are assumed to enjoy full estimated benefits of RCEP and CPTPP on GDP growth – Brookings (2020) estimates that RCEP will bring about 0.4% GDP growth on all participating jurisdictions. <sup>103</sup>
<b>04</b>	<b>Development of economic clusters</b> This megatrend is proxied through the impact of reducing nontariff barriers on GDP within Asia – the IMF (2021) estimates that such policies will bring about 1.6% growth on total GDP. <sup>104</sup>	No impact is assumed for this scenario as economic zones become ineffective when jurisdictions restrict trade.	The impact of a rise in economic clusters is scaled down by 50% to reflect a slow progression in creating trade zones as jurisdictions continue to unevenly recover from the impacts of COVID-19.	In this scenario, geopolitical conflicts are at a minimum, and thus are assumed to have no impact on growth.

05	<p><b>Rise in geopolitics</b> To account for this megatrend, each scenario reflects how an increase in trade wars impacts GDP growth of participating economies. As a proxy, impact on global GDP growth was used across each economy.</p>	<p>The World Economic Forum (2019) estimates that the impact of the US-China trade war was a decline in global GDP growth by 0.7% to 2.8%.<sup>105</sup>An average of both figures were used and scaled up to 150% to reflect an increasing intensity of trade wars between all economies.</p>	<p>In this scenario, trade wars that have begun prior to COVID-19 continue to run – the impact of the US-China trade war is assumed to be the single source of geopolitical instability and continues to encourage organisations to shift their supply chains away from China or the US. However, the impact was scaled down by 25% to reflect the decreasing intensity of such conflicts.</p>	<p>In this scenario, geopolitical conflicts are at a minimum, and thus are assumed to have no impact on growth.</p>
06	<p><b>Rise in digital transformation</b> To account for this megatrend, forecasts incorporate the impact digital transformation has on GDP growth. A study by IDC estimates that the impact of digital transformation on annual GDP growth is 0.80%.<sup>106</sup></p>	<p>In this scenario, the impact has been scaled down by 75% to reflect the impact of trade barriers in access to key technologies that limit the pace of digital transformation.</p>	<p>In this scenario, impact has been scaled down by 50% to reflect the slow-down in economic recovery across markets.</p>	<p>A 100% impact is assumed in this scenario.</p>
07	<p><b>External shocks created by the COVID-19 crisis</b> The IMF's GDP growth trajectory for each economy already accounts for the short- and long-term impacts of COVID-19, thus no exogenous effect has been introduced.<sup>107</sup></p>	<p>Exogenous change has been accounted for by the IMF's GDP growth forecast.</p>	<p>Exogenous change has been accounted for by the IMF's GDP growth forecast.</p>	<p>Exogenous change has been accounted for by the IMF's GDP growth forecast.</p>
08	<p><b>Increasing ESG pressures</b> To account for this megatrend, forecasts incorporate a reduction or change in trade should laws enact restrictions of traded goods that relate to negative societal externalities.</p>	<p>This scenario assumes markets enact strict trade regimes on goods that lead to externalities. As a proxy, a study by the Global Slavery Index was used which estimated the value of the top 5 highest imports (by value) at risk of relying on forced labour among the G20 economies.<sup>108</sup> Using the report's estimated value, a share of imports that rely on forced labour was derived. As the report outlines 15 imported goods as key drivers of forced labour utilisation, this share was doubled to account for all 15 goods (around 8.9% of total imports, used a proxy of total share of trade).</p>	<p>This scenario assumes markets enact strict trade regimes on goods that lead to externalities. This scenario uses the same share of trade susceptible to utilising forced labour derived from the Global Slavery Index. However, the impact was scaled down by 50% to demonstrate how jurisdictions may not enact restrictive policies. As a study by the Boston Consulting Group estimates minimal impact on costs for retail goods once net zero carbon policies are enacted, the impact of environmental initiatives was not captured.<sup>109</sup></p>	<p>In this scenario, no impact was estimated as it is assumed markets are deeply integrated and can mitigate the negative impacts of environmental or forced labour policies. The World Bank estimates that the price of imported goods may rise by 1% should environmental policies be enacted, which is expected to not impact trade flows significantly.<sup>110</sup></p>
09	<p><b>Supply chain innovations</b> The impact of this megatrend is estimated by using the estimated impact of efficient border administration, transport, and communications infrastructure as a proxy. The World Economic Forum (2013) estimates that such innovations will bring about a 5% change in GDP.<sup>111</sup></p>	<p>Supply chain innovations are assumed to have minimal impact in this scenario, thus impact is scaled to 0% to reflect a business-as-usual scenario.</p>	<p>As jurisdictions slowly recover and lift their COVID-19-related trade restrictions, it is assumed that the impact will be scaled down by 75%.</p>	<p>Jurisdictions continue to incorporate supply chain innovations in their supply chains but impact is scaled down by 50% to accommodate for the impact of digital transformation.</p>

## Exhibit A6

Geopolitical uncertainties will largely determine the future of intra-Asia-12 trade, with stark contrast between extreme scenarios



1. Values are estimated at constant 2020 prices.

2. All estimates rely on a log-linear gravity model regression analysis and have been compared against other internal model approaches. The log-linear gravity model is a preferable method as it allows the analysis to isolate the impacts of variables such as the presence of trade agreements or common borders.

SOURCE: ITC; AlphaBeta analysis



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