KONRAD ADENAUER STIFTUNG

Age of Ferment

Developments in Asian–European Trade Relations

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Konrad-Adenauer-Stiftung Association Japan
OAG-House #4F 7-5-56 Akasaka, Minato-ku, Tokyo, Japan


+81-3-6426-5041


KAS-Tokyo@kas.de


www.kas.de/japan

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Abbreviations

AEC	ASEAN Economic Community
AR, VR, MR	Augmented, virtual, or mixed reality
ASEAN	Association of Southeast Asian Nations
BRI	Belt and Road Initiative
CAI	Comprehensive Agreement on Investment
CBAM	Carbon Border Adjustment Mechanism
CBSL	Central Bank of Sri Lanka
CEPA	Comprehensive Economic Partnership Agreement
CMOS	Complementary metal oxide semiconductors
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
CUSMA	Canada-United States-Mexico Agreement
DRAM	Dynamic random access memory
e-CNY	Digital yuan
EC	European Commission
ECH2A	European Clean Hydrogen Alliance
EDA	Emerging and developing Asia
EP	European Parliament
EPA	Economic Partnership Agreement
EU	European Union
EU ETS	European Emissions Trading Scheme
EUA	Emergency use authorisation
EUJEPA	EU-Japan Economic Partnership Agreement
EUR	Euro
FDI	Foreign direct investment
FTA	Free trade agreement
G7	Group of Seven
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
GHG	Greenhouse gases
GMV	Gross merchandise volume

GSP+	Generalised Scheme of Preferences Plus
GVC	Global value chains
HR/VP	High Representative of the Union for Foreign Affairs and Security Policy
HS codes	Harmonised Commodity Description and Coding System
ICT	Information and communications technology
IDI	ICT Development Indicator
ILO	International Labour Organization
IMF	International Monetary Fund
IPI	International procurement instrument
ISDS	Investor-state dispute settlement
ISPs	Internet service providers
IT	Information technology
ITA	Information Technology Agreement
ITRI	Industrial Technology Research Institute
IUCN	International Union for the Conservation of Nature
IXPs	Internet exchange points
JAAF	Joint Apparel Forum of Sri Lanka
JSI	Joint Statement Initiative
Lao PDR	Lao People's Democratic Republic
LCDs	Liquid crystal displays
LEED	Leadership in Energy and Environmental Design
LKR	Sri Lankan rupees
MFN	Most-favoured nation
MIMOS	Malaysian Institute of Microelectronics Systems
MITI	Ministry of International Trade and Industry
MNCs	Multinational corporations
MOQs	Minimum-order quantities
NAFTA	North American Free Trade Agreement
NPL	Nonperforming loans
OECD	Organisation for Economic Co-operation and Development
PLI	Production-linked incentive
PMOS and NMOS	Positive and negative channel metal oxide semiconductor chips
PPE	Personal protective equipment
PPP	Public-private partnerships

PTPL	Pluriregional Trade Partnership of Like-Minded Countries
R&D	Research and development
RCEP	Regional Comprehensive Economic Partnership
SARS	Severe acute respiratory syndrome
SCRI	Supply Chain Resilience Initiative
SKUs	Stock-keeping units
SMEs	Small and medium enterprises
SOEs	State-owned enterprises
TAC	Technical Advisory Committee
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
TSMC	Taiwan Semiconductor Manufacturing Company
UAE	United Arab Emirates
UK	United Kingdom
UMC	United Microelectronics Corporation
US	United States
USD	US dollar
WITS	World Integrated Trade Solution
WTO	World Trade Organization

About the Editor

Dr. Sanjay KATHURIA

Dr. Sanjay Kathuria is a fellow at the Wilson Center in Washington, DC; senior visiting fellow at the Centre for Policy Research, India; non-resident senior fellow at the Institute of South Asian Studies, Singapore; adjunct professor at Georgetown University; and visiting faculty at Ashoka University. Earlier, he was a lead economist at the World Bank in Washington, DC. He is a pre-eminent thinker and commentator on economic development and integration in South Asia. He spent over 27 years at the World Bank, working on South Asia, Latin America and the Caribbean, and Eastern Europe, including field assignments in New Delhi and Dhaka. Before joining the World Bank, he was a fellow at the Indian Council for Research on International Economic Relations in New Delhi. His scholarly and popular writing has focused on South Asia, economic growth and development, trade and globalisation, regional integration, the economics of small states, and gender issues, among others. He is on the editorial board of the *Rising Asia Journal*. He holds a PhD in economics from Oxford University as an Inlaks scholar. He graduated from St. Stephen's College, Delhi, and pursued his master's at the Delhi School of Economics.

Foreword

The COVID-19 pandemic severely disrupted trade. Alongside this massive shock, nationalist and protectionist policies have been on the rise over the last few years. Tariffs have increasingly been abused for negotiation and retaliation in disputes between the world's biggest economies. While it is uncertain how these trends will impact global recovery, they are likely to continue. Yet these trends notwithstanding, international trade endures.

The manifold COVID-19 responses around the world have influenced the future of global trade. Although uncertain and unpredictable in their eventuality and scope, the changes to global trade will likely be substantial and will create significant opportunities as the world deals with, and eventually recovers from, the ravages of the pandemic. In this vein, the papers in this volume—***Age of Ferment: Developments in Asian–European Trade Relations***, published by the Konrad Adenauer Stiftung's (KAS) Regional Economic Programme Asia (SOPAS)—examine the role of trade in facilitating recovery from the COVID-19 pandemic.

The publication contains two sections. The first section deals with transformations in Asia's global value chains in selected sectors and also provides a sketch of the region's economic trajectory following these systemic disruptions. The second section analyses Europe's evolving trade relations with Asia using the recent free-trade and investment agreements as lenses.

As trade relations become increasingly more complex, it is essential to find common ground to ensure an inclusive recovery from the ravages of the current crisis. We hope that the perspectives that these papers offer will be able to contribute to these efforts.

Rabea BRAUER
Director, Regional Economic Programme Asia (SOPAS)
Country Representative, KAS Japan

Cristita Marie Perez
Senior Programme Manager, Regional Economic Programme Asia (SOPAS)
KAS Japan

Editor's Introduction

Sanjay KATHURIA

Continued Ferment

The global economy is in ferment. Even before the COVID-19 pandemic, the world was already struggling to cope with slowing growth across advanced and emerging market economies, escalated trade tensions—including the US-China trade war and Brexit—and the growing urgency of dealing with climate change. The World Bank's January 2019 edition of its global economic prospects termed this situation as 'darkening skies' (World Bank, 2019).

Then came COVID-19, which had a catastrophic impact on the global economy. World economic growth dropped from 2.6% in 2019 to -3.4% in 2020. This was accompanied by an unprecedented increase of 97 million in the ranks of the global poor in 2020. Even though poverty declined in 2021, the number of people living in poverty in 2021 is estimated to be much higher than in 2019, a reversal of the historical decline in global poverty (Mahler et al., 2021).

Recovery is now under way, with world economic output estimated to have grown at 5.5% in 2021. But this growth is projected to slow down to 4.1% in 2022, reflecting continued global uncertainty, continuation of COVID-19 outbreaks, falling fiscal support, and persistent supply chain disruptions arising from demand and supply imbalances (World Bank, 2022).

Trade is an integral part of the world economy and, if anything, has been more volatile than overall output. The volume of world trade declined by 8.2% in 2020, rose by 9.5% in 2021, but is projected to slow to 5.8% growth in 2022.[1]

Indeed, after an initial collapse, especially in the first two quarters after the spread of COVID-19 in 2020, trade has proved resilient and supportive of recovery. Goods trade bounced back more sharply than GDP. Despite having been under considerable strain, global supply chains have been quite resilient and have allowed countries critical access to medical supplies, food, and consumer goods, thereby supporting their economic recovery. GDP recovered more swiftly in countries which had strong trade linkages with countries less affected by COVID-19 (WTO, 2021).

1 Trade here includes both goods and non-factor services. Data from World Bank, 2022.

However, while trade has picked up, a surge in global inflation has created new problems for the poor across the globe, and much of this price increase can be attributed to supply chain snags.

Emerging and Ongoing Cross-Border Issues

The pandemic has pushed cross-border issues to the forefront of political, economic, and business discourse. These issues include, but are not limited to: the cross-border communicability of the virus; the global collaboration in the hunt for the COVID-19 vaccine; the debate on the waiver of intellectual property for new vaccines; vaccine nationalism and unequal access to vaccines; the surge in trade in medical goods, including the export of vaccines, once developed and approved; the pressure on global supply chains in the face of the massive shift in demand towards goods and away from services; and the renewed push to diversify supply sources for critical raw materials and products.

Even before COVID-19, trade issues had often occupied centre stage. This was the case for many reasons, inter alia, the US-China trade war and its global impact; Brexit and its aftermath; the backlash against globalisation; the decline in the credibility of the World Trade Organization, including the paralysis of the dispute settlement mechanism; and the far-reaching implications of digital and digitally enabled trade. There was also growing recognition that trade can play a very important role in addressing climate change.

These issues will serve as a useful backdrop to the specific topics addressed in this book, highlighted in the following sections. The book is primarily about trade and deals with issues that are set to occupy or, in some cases, already occupy centre stage in global economic relations. Part I of the book focuses on issues within Asia, although many of those considered are also relevant to Part II, which examines trade and connectivity between Asia and Europe.

Asia in Transition

East Asia and South Asia are always cited as foremost examples of regions that have benefitted the most from international trade and the creation of jobs that have lifted hundreds of millions of people out of poverty. For these regions, trade will continue to play a big role in future growth and poverty reduction, including for those countries that remain relatively poor, which means most countries in South Asia, as well as some in East Asia.

East Asia has developed a well-justified reputation as a dynamic trading region, being at the centre of many global value chains, as well as a large and growing

market for consumer goods from all over the world. It also trades a lot within the region, with well-developed regional value chains and trading relationships.

To further cement regional trade and value chains, and to reduce the noise from an increasingly protectionist world, fifteen countries of the Asia-Pacific region, led by the ASEAN grouping, negotiated the world's largest trade agreement, the Regional Comprehensive Economic Partnership (RCEP). Apart from ASEAN countries, the other signatories include China, Australia, Japan, South Korea, and New Zealand. While the agreement may not appear to be ambitious, it will have a significant impact on trade facilitation by harmonising the rules of origin within the fifteen countries, replacing the five different trade regimes that hitherto prevailed among different sets of countries. Its framework also allows improvements over time, in the manner that ASEAN-driven trade agreements tend to do. The RCEP became effective on 1 January 2022, for the ten governments that had ratified the pact till that point.

In the wake of COVID-19, there are renewed concerns in importing countries about concentration of supply chains, both at a general level and also focusing on products deemed to be critical. Not surprisingly, given their success, East Asian countries, particularly China, are the focus of such concerns.

South Asia could not be more different from East Asia on the trading front. It is often labelled as the least integrated region in the world, with significant barriers against trade within the region, as well as with the rest of the world.[2] Despite its trading success in the last two decades, the region remains protectionist and hesitant to commit to open trade regimes. No country in the region has signed on to any regional/major trade pacts in recent years: India, which was a party to RCEP, dropped out of the negotiations in 2019.[3] In this context, could COVID-19 and global trade realignments force South Asian countries to take a fresh look at their approach to trade and integration?

Resilient supply chains

Despite popular perceptions, headlined by a four- to six-fold increase in shipping costs in 2021, and the image of a giant container ship stranded in the Suez Canal,

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2 See Kathuria (2018) for more details.

3 In February 2022, India signed a free trade agreement with the United Arab Emirates. Under this, according to news reports, India would allow duty-free access to 90% of goods from the UAE in 10 years. A large number of 'sensitive' products have been kept outside the FTA.

global supply chains have, for the most part, held up well during the pandemic. They have been resilient and responsive to market signals. And they are not easy to reverse, having been built up over decades.[4]

But there is no denying the strains supply chains have been subject to, owing to the enormous shift in demand towards goods, combined with labour shortages. These strains are reflected in inflation surges across the world: in the US, for example, consumer prices rose by 7.5% in January, a 40-year high. Similar stories are echoed in Europe and emerging markets.

Persistent concern has been expressed with regard to supplier concentration and resultant vulnerabilities along the supply chain and are likely to lead to some shifts. These concerns appear to exercise governments more than private companies, especially since China has not hesitated to use coercive trade policy to advance its geopolitical interests.

Indeed, the theatre of the Indo-Pacific has seen a flurry of activity since September 2020—at least in terms of discussion and planning—focusing, in one way or another, on supply chain vulnerabilities and the production location of critical products. Such issues are discussed by *Amitendu Palit* in the opening chapter of this book. Palit notes that many countries and businesses focused on reducing economic dependence on China, for geopolitical reasons and also because, as the first epicentre of the pandemic, supply disruptions began from China. One such organised effort was the Supply Chain Resilience Initiative (SCRI), announced by Japan, India, and Australia in September 2020 and formally launched in April 2021. These three countries, along with the United States, are also part of the Quad initiative, which was conceived as an informal security dialogue. The Quad was resurrected in 2017 and has taken on new momentum since 2020, with new emphasis on its economic dimensions. Most recently, in February 2022, the White House released the Indo-Pacific Strategy for the US (White House, 2022), which seeks, inter alia, to support a free and open Indo-Pacific, strengthen partnerships with regional partners, and strengthen the Quad.

None of this has led to much by way of concrete investments yet. The intent to decouple from China is clearly strong, but how far these efforts go in practice remains to be seen. On the one hand, there are a variety of initiatives, often complementary to each other, to encourage and incentivise, for example, investment in vaccines and alternative supply chains in critical technologies. These might well lead to new rules and frameworks for important supply chains.

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4 See, for example, *The Economist* (2021).

On the other hand, as Palit elucidates, China controls many resources and has a very competitive ecosystem for a wide range of industrial inputs; it is also seeking to reduce its own dependence on external markets and localise supply chains within China. It remains to be seen how these different forces will play out.

Semiconductors and strategic rivalries

Perhaps no industry has so focused the mind of policymakers in recent times as semiconductors. Semiconductors are the brains of modern electronics and are critical for smartphones, computers, transportation, clean energy, military systems, and advances across all these and countless other products. Even before the pandemic, the Trump administration had launched a trade war against the Chinese semiconductor industry. Then came COVID-19.

COVID-19 generated a shortage of semiconductor chips, thanks to people being forced to work from home, and the resultant unforeseen soaring demand for consumer durables, among other things. The knock-on effect of this was also a widely felt shortage of semiconductors for automobiles.

In the wake of these shortages, it was perhaps inevitable that Western governments would want to intervene in semiconductor production, given that the currently dominant producers are in 'faraway' locations such as South Korea, Taiwan, and other East Asian countries. The potential threat of war between China and Taiwan also makes the US nervous about semiconductor supplies. Apart from the US and Europe, India, too, is making a push for domestic manufacturing in this sector.

The second chapter in this volume, by *Willem Thorbecke,* considers these issues and also provides a historical account of the semiconductor industry, starting with their invention in the US, their subsequent development in Japan, followed by South Korea and Taiwan, and, more recently, China. This is useful background for the policy lessons Thorbecke puts forward. Given how expensive semiconductor fabrication is, policymakers could end up saving a lot of taxpayer money by paying close attention to the kinds of issues raised in the paper.

Semiconductors will continue to occupy centre stage in global economics and geopolitics for the foreseeable future. Whether East Asian countries continue to dominate the sector or become more integrated into their regional market, and whether or not other serious players will emerge, will be fascinating to observe.

The digital economy and recovery

All over the world, trends towards digitalisation were accelerated by the pandemic, arising from the need for physical distancing. This led to work from home, increased demand for goods instead of services, a boom in e-commerce, and a surge in remote delivery of critical services like health and education, among other things. None of this, however, could compensate for the lockdowns and the resultant declines in output, which led to a decline in world GDP in 2020, the first time since 2009, reflecting the global financial crisis.

Given these changes, it is logical for countries to ask whether the digital economy can be a significant part of their recovery strategies in the short term and sustainable growth in the long term. This is what *Sineenat Sermcheep* sets out to do, in the third chapter in this volume, posing the questions for the ten economies that constitute the Association of Southeast Asian Nations (ASEAN). Sermcheep notes the strong fundamentals in ASEAN for riding the digital bandwagon, including a young population, a large and growing economic base (including the regional market), and growing internet usage. The fact that many countries are below the global average on digital development in fact provides an opportunity for catch-up growth.

Sermcheep proposes a set of measures that ASEAN can consider to push digital development in the region, with a strong focus on policies to attract foreign investment in the digital economy. Many of these proposals would also be applicable to other economies that share ASEAN-type features—such as many of the economies in South Asia, with young populations, dynamic growth rates, growing internet usage, and significant potential for catch-up growth.

While some of the lower-hanging fruit will be relatively easier to implement, policymakers will need to pay close attention to issues that are important but more intractable. One over-arching issue in a development sense is digital inclusion—ensuring that digitalisation becomes a force for inclusion, minimising the potential for the 'digital divide'. Other issues include, but are not limited to: regional regulatory mechanisms, which are important if markets are to become truly regional; data protection and data localisation; cybersecurity; and ensuring continued competition in digital provision.

South Asia reboot through trade

COVID-19 hit South Asia's growth harder than it did most other regions in the world, thanks to severe lockdowns, especially in India, the dominant economy in the region. More than half of the pandemic-induced poverty originates in South

Asia, partly owing to the dominance of the informal sector in the region. A strong recovery is now underway, with growth estimated at 7% in 2021 compared to -5.2% in 2020, and forecast at 7.6% for 2022 (World Bank, 2022). However, the pandemic has also led to higher public and private debt and exposed external sector vulnerabilities in some countries that were highly dependent on tourism. Also, formal sector employment has yet to recover to pre-COVID levels.

Even though South Asian countries have reaped significant benefits from trade, they have historically been protectionist and, at best, cautious, in their approach to international trade. In fact, they have become even less open to trade over the last decade, which represents a denial of their own experiences and success. Could changing global trade alignments and the impact of COVID-19 change this approach? These are the questions tackled by *Srinivasan Thirumalai* in chapter 4 of this volume.

In fact, as Srinivasan points out, South Asian exports have recovered faster than real GDP, and in most countries, this pattern is also true for labour-intensive manufactured exports. Remittance inflows, which are critical for the balance of payments of most countries, have proved resilient, despite fears to the contrary. On the other hand, tourism in the region is yet to recover fully, and this is in line with global trends—for example, international tourist arrivals are still 65% lower in December 2021 than December 2019.[5]

As trade settles down to a more 'normal' pattern, what can South Asian countries do to benefit from international opportunities on a more permanent footing? Clearly, the region is missing a big opportunity by not creating a regional buffer against world trade volatility, in the manner of East Asia. Srinivasan also suggests that COVID-era liberalisation measures, including those undertaken in the medical goods sector, could be made more permanent.

The apparel sector after the pandemic: Sri Lanka

The textiles and apparel sector dominates goods exports in many South Asian countries, especially for Bangladesh (apparel exports exceed 86% of total goods exports), Pakistan (apparel and textiles account for over 40%), Sri Lanka (apparel over 46%), and Nepal (apparel and textiles exceed 34%). Such dominance makes these economies vulnerable to export fluctuations in the sector, which may arise from a downturn in demand, increased competition, or supply-side issues such as raw material shortages. Given the informal nature of employment, especially in the apparel sector in the region, this vulnerability can quickly translate into joblessness and poverty, as happened in the aftermath of COVID-19.

Sri Lanka is a distinct case. Its apparel industry has gained recognition as a producer of 'garments without guilt', based on ethical practices, environmentally conscious production, and high labour standards. It now produces high-quality garments, and several firms do their own design and innovation, and have established production bases in many different countries all over the world. *Anushka Wijesinha*, in chapter 5 of this volume, explores how the industry reacted to the shock of COVID-19 and how it is seeking to increase its resilience. The latter is particularly relevant to other countries in South Asia and beyond.

One aspect of post-COVID resilience is companies' clear desire to diversify their supply chains and not rely only on China, a theme similar to that raised by Palit in chapter 1. This desire to diversify, Wijesinha notes, has positive implications for sourcing from South Asia, where, for example, India and Pakistan have input supply capabilities. Another upshot is consideration of 'flexible redundancy' across the domestic supply chain and also building redundancy through establishing or increasing overseas investment and production.

Asia-Europe Trade Relations

Europe-East Asia trade constitutes the largest inter-regional trading relationship in the world. Goods trade between Europe-Central Asia and East Asia-Pacific amounted to almost 1.9 trillion USD in 2019 (WITS data). Compare this with the 1.46 trillion USD in trade between North America and Europe and Central Asia.[6]

Trade is a symbiotic exchange. Europe relies on East Asia for a wide range of inputs; moreover, the region is a growing market for European goods. East Asia, meanwhile, relies on Europe for technology and, in turn, as a vast market for its own products.

But the strength of this relationship also raises questions, especially for Europe, and these questions are centred around China. Of European imports worth 1.12 trillion USD from East Asia, 57% originated from China. Against the backdrop of the US-China trade war, and continued frictions thereafter, there is pressure on Europe to reduce its trade and technology exchange with China. These pressures have been exacerbated by the pandemic and its aftermath. Some also anticipate that RCEP could lead to further consolidation of supply chains around China, lending urgency to the China question.

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6 The aggregate data presented in WITS groups Europe with Central Asia, and East Asia with the Pacific, and this is the aggregation used in this section of the introduction. Even though the discussion here pertains to the European Union and East Asia, all the inferences remain valid.

India and, more broadly, South Asia are sometimes discussed as a possible path for the diversification of supply chains away from China. However, given that South Asia lacks a large-scale and competitive ecosystem in a wide range of products and also has much higher tariffs than China, this could only be a long term play. Compared to Europe's imports of 638 billion USD from China in 2019, imports from South Asia amounted to only 120 billion USD. And India chose not to be part of the supply chain opportunities presented by RCEP.

Europe Asia trade relations

The question thus presents itself: how should Europe navigate its trade and economic relations with Asia in an increasingly complex geo-economic environment, defined by US-China antagonism, intensification of regional integration in Asia, and the crisis in the rules-based international trade order? The sixth chapter in this volume, by *Axel Berger*, considers these important issues, both for the European Union and for the UK.

Berger notes that despite China's primacy in EU and UK imports, both the EU and the UK should pursue (and indeed are pursuing) FTAs with the many countries of the Asia-Pacific region. This is a strategic move given the increasing integration within this dynamic region, and the importance of not losing preference margins. The EU, after failed negotiations with ASEAN, concluded bilateral negotiations with Singapore and Vietnam; the EU is also pursuing bilateral negotiations with Australia, New Zealand, and India. FTAs with South Korea and Japan are already in place. The UK, on its part, launched a flurry of trade activities after Brexit, including rolling over FTAs that were already in place while it was part of the EU; new agreements were signed with Japan and Australia, and negotiations are underway with India and New Zealand. Additionally, the UK applied to join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) that currently has eleven member states from the Asia-Pacific region. Berger suggests that the latter development may also goad the EU into discussing integration with the CPTPP, with the most important aspect of such a major inter-regional agreement being an affirmation of a rules-based liberal trading order to balance China's state-led system.

Given the growing economic clout of the Asia-Pacific, it is not surprising that the EU and the UK are seeking deeper engagement with the region, all the while, given geo-economic realities, keeping China at arm's length. At the same time, the EU will need to continue engaging with China, not only because it is its most important extra-EU trading partner, but also due to its critical quest for WTO reform, for which China's cooperation is required.

A different idea

Clearly, whether and how to decouple from China is a pressing issue for the EU, as it is for many other economies. Bilateral trade agreements with different countries in the Asia-Pacific are one option that is already being pursued, but, while more tractable, this is less systemic in its impact. Moreover, as pointed out by *Jürgen Matthes* in chapter 7 in this volume, the EU's ambitious FTA standards have so far not allowed the completion of FTAs with many dynamic ASEAN economies. Tying up with RCEP does not seem realistic, given that the agreements in the pact do not match up to the EU's FTA standards, and given that China is an integral part of RCEP. Joining the CPTPP is certainly a possibility, but Matthes advances a more 'far-reaching option'.

Matthes proposes a 'Pluri-regional Trade Partnership of Like-Minded Countries' (PTPL) which would include all the important market economies, such as the EU, the US, Japan, Canada, the UK, Switzerland, and others in the Indo-Pacific. Besides giving the EU a foothold in the Indo-Pacific, the main objective of the PTPL would be to advance a set of modern trade rules that could form the basis of reform in the global trading system under the WTO.

The similarities and contrasts between the two approaches (EU-CPTPP and PTPL) are instructive. Both would be so-called 'mega-regional' agreements, and reforming the world trading system would be a common objective. By joining the CPTPP, the EU would avoid potential frictions with the US, with which it differs in approach on several fronts. Presumably, it would also be quicker to join an existing framework than to create a new one. On the other hand, the rallying point of a new PTPL would be to bring together a coalition of like-minded countries, united in their desire to reform global trade, an objective that could be far more explicit than was the case in the CPTPP. And, of course, by bringing in the EU and the US together, it would become the world's biggest mega-regional, with enough clout to influence global trading rules.

Supply chain risks

Globalisation has enabled a high degree of specialisation, division of labour, and the formation of complex and interwoven supply chains. For Europe, the share of Asian economies in total extra-EU imports has been growing, and Asia is now the largest supplier of imports to the continent. *Hubertus Bardt*, in chapter 8 of this volume, discusses the increasing attention being paid to risks in the supply chain arising from COVID-19. He notes that managing supply chain risks has always been important for internationally active companies. That China is where COVID-19 began has made this discourse highly politicised.

Bardt discusses many different kinds of supply chain risks, or the perceptions of those risks, such as those relating to shipping, inadequate competition, natural resource monopolies, trade distortions, politicisation, protectionism, health, climate change, and so forth. The biggest risk is China's state capitalism, its resulting distortions, and China's enormous share of global exports. But despite the stresses, globalisation has delivered very significant benefits, and even the maligned global supply chains weathered pandemic-induced shocks and strains successfully. He notes that the supply chain risks need to be managed for the sake of preserving the gains of globalisation. The baby should not be thrown out with the bathwater.

Asia Europe trade after RCEP

As the world's biggest trade agreement, and with Asia being Europe's largest trading partner, it is not surprising that European scholars and policymakers have focused their attention upon RCEP. In chapter 9 of this volume, *Alessia Amighini* suggests that RCEP signals the need for a fresh look at EU-Asia trade relations, and points out that it may be more effective to have agreements around sectors (such as digital trade) rather than with different countries/regions.

Amighini notes that even without RCEP, trade among its member countries was growing, with much higher intra-regional shares for imports than for exports, reflecting the high degree of sourcing already taking place. With the harmonisation of rules of origin, 'Factory RCEP' is likely to become even more integrated, with fresh inducements for integration between Northeast Asia and Southeast Asia. For Europe, the overall impact on trade volumes may not be very large, but in individual sectors, e.g. automotive and industrial machinery, the impact can be larger because of inroads from Japan and South Korea.

Cross-border e-commerce is highly dynamic and of growing importance in world trade, with the rules for digital trade still being formulated. Many Asian countries

are, or are likely to be, on the frontiers of e-commerce. Amighini proposes deepening EU-Asia relations via collaboration on defining the new rules of digital trade, dealing with the major contentious issues, including personal data privacy and protection, and data localisation.

EU-China investment agreement

As mentioned earlier, the EU has high standards when negotiating trade agreements, which renders an EU-China FTA a complex proposition. An investment agreement appears to have been the more feasible option. *Chien-Huei Wu*, in chapter 10 of this volume, argues that the Trump administration's unilateral approach to trade and industrial policy pushed both sides to conclude the EU-China Comprehensive Agreement on Investment (CAI). Not that the draft agreement was soft: according to the EU, it 'will be the most ambitious agreement that China has ever concluded with a third country' (European Commission, 2020).

Of course, the CAI has been in the works for a while, at least since 2013, and both sides have had substantive reasons to push forward. But incentives can swiftly change. Wu writes that with the Biden administration reaching out to reconcile with its allies, imposition of reciprocal sanctions against Chinese and EU officials, an inward turn in Chinese economic policies, and rising nationalism in China, the ratification of the CAI by the EU appears increasingly unlikely. In fact, Wu cautions the EU against ratification, arguing that it is a choice between upholding European values and succumbing to the lure of the Chinese market.

Trade and the European Green Deal

Europe's Green Deal, announced towards the end of 2019, was a global breakthrough for sustainable development, committing the EU to net zero greenhouse gas emissions by 2050. It is also seen as an opportunity for the EU's industrial sector to transition to carbon neutrality while safeguarding its competitiveness. *Gauri Khandekar*, in the last chapter of the volume, discusses the differential impact of COVID-19 on value chains in the EU and Asia, and the likely impact of the EU's green commitments on EU-Asia trade.

To ensure that its climate goals do not hamstring its domestic firms, the EU has proposed a 'Carbon Border Adjustment Mechanism' (CBAM) for some sectors. The CBAM—set to become fully operational in 2026—will require importers of carbon-intensive production, such as cement, steel, aluminium, fertiliser, etc, to buy carbon certificates corresponding to the EU's own carbon pricing rules. Khandekar argues that given the size of the European market, the climate

transition creates significant incentives for producing countries to green their own production. It also creates opportunities for trade in hydrogen, that could play an important role in decarbonisation. She also suggests that the EU could lead a collaborative platform for low-carbon technologies in energy-intensive sectors, with potentially far-reaching consequences.

The Age of Ferment

The book offers a rich and diverse menu of discussions, much more than can be captured in an introduction. Nonetheless, the following final thoughts, posed mainly as questions, draw attention to some of the most important trade-related issues of the day, in an EU-Asia context, including one issue—the possible impact of the Russian invasion—which has only come to the fore after the chapters were written.

Conflict and Response. Russia's invasion of Ukraine on 24 February 2022 will have a deep and lasting impact on the global economy. In the short term, it will lead to higher inflation and inhibit the post-COVID economic recovery. While difficult to predict, the longer term could see a more pronounced reorientation of global supply chains than seemed likely in what was 'merely' a post-COVID world.[7] Moreover, Russia and the world now have knowledge of what severe and relentless financial and economic sanctions can look like, and the learnings from the imposition and response to sanctions will become part of collective memory.

Diversification. The EU has sought autonomy in its economic relations with countries like China, rather than be pushed by the US into taking uncomfortable positions. The negotiation of the CAI was one such manifestation. Nonetheless, the EU, like other regions/countries, is actively seeking to diversify its supply chains, including some amount of reshoring, despite the higher costs. Will the aftermath of the invasion energise the impetus to diversify supply chains away from China? This could happen as a sanctioned Russia seeks even deeper economic ties with China, and China accelerates its own push to inward economic orientation to cope with what may possibly become an increasingly antagonistic environment.

Future of RCEP. On Asian/Pacific integration, manifested for instance in RCEP, could there be some fractures over Russia? Singapore, Japan, South Korea, and Australia have announced or joined sanctions, but China, a strong partner of Russia, has not condemned the invasion and, instead, called for dialogue. It is hard to say whether these differences will reduce some members' enthusiasm

7 See the Economist (2022)

for RCEP, or whether the logic of trade and economics will prevail, and RCEP value chains will continue to deepen.

The X Factor. India has been the big hope for countries seeking a huge, dynamic, and democratic counterweight to China. This is manifested, for example, in the renewed enthusiasm for the Quad, the formation of the SCRI, the start of FTA discussions between India and the UK, and resumption of such talks between India and the EU. But India, like its South Asian brethren, has been famously hesitant on trade and has turned more protectionist over the last six years. Could India provide the missing X factor in the global quest for supply chain diversification? Could it become economically more ambitious and shed its inward-oriented approach?

Climate Cooperation. Despite all the other centrifugal pressures, the world does have common cause in reducing greenhouse gas emissions. Trade can play a role here. The EU is the largest economy in the world. If the economies of the Asia-Pacific (including China, the world's biggest emitter), which accounted for more than half of global carbon dioxide emissions in 2020, are incentivised by the EU's enormous volume of imports to comply with the CBAM, this can be a significant contribution to the cause. Of course, this can only supplement—albeit in important ways—global climate talks and national commitments (see Weyand, 2021).

WTO Reform. Reform of the WTO is urgently needed to restore the credibility of the rules-based trading system. The EU will need to play a leading role in this process and should galvanise support from other major players, such as China and members of the CPTPP—or even the CPTPP as a group (either as part of a coalition or via an FTA with the CPTPP).

The age of ferment is truly upon us. One scenario is that despite all the current provocations, the inherent logic of globalisation is not jettisoned, and the powerful incentives for trade and international exchange prevail. If this scenario plays out, it will likely entail more supply chain diversification, domestic reshoring and near-shoring, and perhaps conscious building of strategic reserves of different products. A more pessimistic scenario would see a more antagonistic global environment, a sharper division of the world towards China-led and US-led economic blocs, and, accompanying that, an accelerated diversification of supply chains away from China. For the collective good, let us hope that the former scenario prevails.

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Asia in Transition

COVID-19 and Resilient Supply Chains: A Regional Economic Perspective

Amitendu PALIT

Abstract

The outbreak of the COVID-19 pandemic has accelerated the reorganisation of supply chains with the goal of enhancing their resilience. The Supply Chain Resilience Initiative (SCRI) proposed by Japan, Australia, and India is a major effort in this regard. This paper examines the prospects of the initiative from the perspective of the Indo-Pacific.

The COVID-19 pandemic has drawn attention to the vulnerabilities of global supply chains and to the importance of enhancing their resilience. The degree to which supply chains are able to remain resilient in the face of multiple sourcing disruptions has always been a matter of concern for businesses. Such concerns on part of businesses are now frequently accompanied by sovereign concerns. The latter generally focus on the risk of over-dependence, for instance on China, which is then able to geopolitically exploit its controls over supply chains. The gravity of these concerns has led to the growth of initiatives such as the Supply Chain Resilience Initiative (SCRI), promoted by Japan, India, and Australia.

This chapter examines the differences in the nature of reorganisation of supply chains before and after the COVID-19 pandemic in order to comprehend the context behind the SCRI. It studies the objectives of the SCRI and tries to identify the industrial supply chains that might be impacted by the initiative. It attempts to shed light upon the prospects of the SCRI, including the possibility of its triggering a decoupling from China. The paper concludes by reflecting on the scope of the initiative contributing to economic rule-making in the Indo-Pacific.

Supply chain reorganisation: Before and after COVID-19

Global supply chains were shifting even before the outbreak of COVID-19 from January 2020. The pre-COVID-19 reorganisations in the last decade were influenced by several factors. These include structural transformations of industries, notably automation and digitalisation of industrial functions, as

well as rising labour costs in major sourcing locations. The changes compelled lead firms in various manufacturing industries to contemplate supply chain reorganisations.

One of the strongest exogenous motivations for repositioning supply chains in the last decade arose from the United States (US)-China trade war. The conflict that began in 2018 has led to sharp increases in tariffs on several imports by both countries. This accelerated tendencies of global businesses to consider producing in countries other than China. This was an inevitable outcome of higher tariffs that made manufacturing in China and exporting to the US a much more expensive proposition than before. Several businesses, particularly American firms operating from China, were compelled to consider relocation elsewhere in the Asia-Pacific, such as Southeast Asia (Wong, 2018).

The relocation engineered by the 'price effect' of higher tariffs was, however, mostly for industrial items that could be relatively easily produced from other locations without incurring significant capital costs (e.g. vehicle parts and components). Locations already producing similar final products as mainland China were obvious choices for lead firms when deciding relocation. The shifting of smartphone parts and electronics supply chains out of China to elsewhere in the Asia-Pacific followed the same logic of existing capacities.[1]

COVID-19 highlighted the vulnerabilities of supply chains and thus heightened the imperative of undertaking a more exhaustive reorganisation. A critical point relates to the risks arising from excessive dependence on specific locations for sourcing and production. The received wisdom was specifically with respect to heavy dependence on China, which was also the earliest epicentre of the pandemic.

That excessive dependence on a single location caused risks for supply chain security was already known and had been felt during natural disasters, such as the Fukushima earthquake and tsunami in Japan in 2016, or the large-scale flooding in Thailand in 2011. On both occasions, heavy dependence of downstream final-product manufacturers and assemblers on parts and components sourced from Japan and Thailand adversely impacted performances across the entire supply chains, notably in automobiles and high-tech industries (WEF, 2013). However, the disruptions were temporary and confined to a few supply chains. The impact of COVID-19 has not only been more widespread and severe, but also more lasting.

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1 Samsung moved part of its smartphone production to its facilities in India and Vietnam, while LG shifted consumer electronics production to Korea (Aylor et al., 2020).

The early supply-chain setbacks from COVID-19 primarily affected industries and countries sourcing extensively from China. Economic shutdown in China following the outbreak of COVID-19 impacted several supply chains, as the halt in factory output adversely impacted procurement of inputs. The supply-side effect compounded over time as the pandemic spread to the rest of the Asia-Pacific region, particularly to Southeast Asia, which houses several hubs for global manufacturing.

Moreover, the supply-side bottlenecks in sourcing were soon further magnified by demand-side impacts. Widespread shutdowns almost everywhere affected livelihoods, wages, and incomes, leading to a marked reduction in consumer demand. There were also significant shifts in demand for sourcing of inputs, such as a surge in semiconductor chips, which arose from new customer preferences induced by COVID-19.[2] With the pandemic persisting into 2021, and most of Asia-Pacific slipping into periodic economic closures, industries continued to face poor prospects due to diminished demand.

China recovered reasonably fast from the setback it suffered during the onset of COVID-19. From the middle of 2020, economic activity on the mainland had begun returning to full capacity. However, the supply disruptions that had already occurred were severe enough to draw the attention of several global businesses, and their home countries, to the importance of reducing economic dependence on China. This realisation was compounded by the geopolitical urge to reduce economic dependence on China in greater national security interests. Several countries (e.g. the US, Australia, India, and Japan) whose relations with China worsened following the outbreak—contributed partly by concerns over China's role in the origin and spread of COVID-19 and the resultant mistrust of it—have increasingly been joined by other major democracies and global middle powers wary of China, including those from the G7, in working collectively to increase the resilience of global supply chains (White House, 2021b).

The noticeable efforts of several major global economies to reduce economic dependence on China so as to increase the resilience of global supply chains is different from supply-chain-reorganisation efforts witnessed before COVID-19. The difference lies primarily in the geopolitical provocation behind reshuffling supply chains in the current instance, namely, China's proclivity to 'weaponise'

2 Lesser demand for automobiles led to lower demand for automotive chips as vehicle suppliers cut back orders. However, the shift to digital modes of working and work from home practices led to a higher demand for electronic devices, and a concomitant demand for consumer electronic chips (White House, 2021a, p. 25).

the economic dependence that various countries have on it (Braw, 2020). In the aftermath of COVID-19, concerns over such weaponisation have increased, given many countries' realisation of their heavy sourcing dependencies on China, particularly in strategic industries like pharmaceuticals and electronics. Anxieties have focused upon how China might use its economic heft to restrict supplies through coercive trade measures.[3] Moreover, both COVID-19 and subsequent supply-chain-resilience fears about China arose following the US' weaponisation of its own economic heft in various trade actions of the Trump administration (Wilson, 2021), making such worries understandable.

These geopolitical apprehensions add a different impetus to the imperative of making supply chains resilient. Achieving such resilience, as revealed by the multi-country strategies announced post-COVID-19, requires a variety of efforts. These include national efforts to enlarge domestic capacities for augmenting local production, particularly in industries where import dependence on China is overwhelming. Some of these industries, as seen from initiatives announced by the US and India, are sensitive from a national security perspective, such as the production of semiconductors, electronics, telecommunications, pharmaceuticals, and the mining of critical minerals.[4] These domestic efforts to reorder supply chains are joined by larger initiatives involving groups of countries.

Understanding the Supply Chain Resilience Initiative (SCRI)

The SCRI announced by Japan, India, and Australia is one of the leading post-COVID-19 multi-country initiatives for strengthening supply chains. The effort may significantly influence the configuration of future supply chains in the Indo-Pacific, if it matures unhindered.

Statements and intentions

Economic ministers from Australia, India, and Japan announced the SCRI on 1 September 2020 (Birmingham et al., 2020). The key features of the initiative, as reflected in the statement by the ministers, are as follows:

- The proponent countries commit to delivering 'a free, fair, inclusive, non-discriminatory, transparent, predictable and stable trade and investment environment'.

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3 Wilson (2021) discusses trade coercive actions by China before and after COVID-19.

4 The Biden administration's 100-Day Supply Chain Review and India's Production Linked Incentive (PLI) scheme both highlight these industries.

- The COVID-19 pandemic and the shifts in the global economic and technological landscapes highlight the 'necessity and potential to enhance the resilience of supply chains in the Indo-Pacifc region'.
- The need for regional cooperation in enhancing resilience of supply chains in the Indo-Pacific is 'pressing' and the three countries intend to work together, through the SCRI, so as to achieve this objective.
- Other countries in the region subscribing to the broad goals of the initiative are invited to join it.

Nearly eight months after the first pronouncement, the economic ministers from the SCRI countries issued their next statement, on 27 April 2021 (Tehan et al., 2021). This statement marked the formal launching of the initiative. The key points in the statement were as follows:

- The impact of the pandemic was far-reaching, including human lives, livelihoods, and economies, but also supply chains and their vulnerabilities.
- Avoiding supply chain disruptions required managing risks and ensuring continuity, which can be achieved through greater utilisation of digital technology and diversification of trade and investment.
- The initial projects under the initiative are to include 'best practices on supply chain resilience', investment promotion, and buyer-seller events for exploring diversification.
- The ministers agreed to meet annually in order to review progress on the initiative. They also agreed that consensus is required so as to expand the scope of the initiative.

Taken overall, the statements on the SCRI so far have emphasised the urgency of increasing the resilience of supply chains in the Indo-Pacific region and have highlighted the importance of countries working together for this purpose. The initiative is clearly not intended to stay confined to Japan, Australia, and India but is meant to expand to more countries. The geographical emphasis of the initiative is clear—it aims to cover as much of the Indo-Pacific as possible. It is also important to identify which industries the initiative is likely to focus upon.

Industries and resilience

Neither of the two ministerial statements mentioned above highlight specific industries to be addressed by the initiative. Nevertheless, in the September 2020 statement, there is a rather general allusion to 'regional supply chains',

and in the April 2021 statement, these are further specified as 'some supply chains [which] have been left vulnerable due to a range of factors' (Tehan et al., 2021). The efforts to increase resilience, ostensibly, would focus more upon these 'vulnerable' industries. Yet which industries are in fact being referred to is left unsaid. An examination of other initiatives evolving alongside the SCRI, and involving SCRI countries, may shed some light.

Significant announcements on supply chains in the Indo-Pacific have come from the quad partnership, involving the three SCRI countries and the US. The Quad, as the quadrilateral informal security dialogue between the US, Japan, India, and Australia is popularly referred to, has enlarged its collaboration beyond security issues. In a meeting of its foreign ministers on 6 October 2020, the group agreed to work on improving supply chain resilience with the broader goal of ensuring a free, open, and inclusive Indo-Pacific region (Chaudhury, 2020). In its subsequent pronouncements, articulated during the summit of its heads of state on 12 March 2021, the Quad focused on three key areas in which greater engagement among the four members was desired—namely, vaccines, climate change, and critical technologies (White House, 2021c). These priorities may yield some insights about the supply chains that the SCRI might be acting on.

The current global COVID-19 pandemic makes the emphasis on vaccines by the Quad a natural priority. The experience has shown the importance of ensuring the robustness and agility of pharmaceutical supply chains, so as to enable them to overcome unforeseen supply setbacks. Vaccines, or biologics, are important end products of the pharmaceutical industry, along with finished dosage forms. Supply chains for vaccines are complicated, involving extensive sourcing of a wide range of pharmaceutical ingredients. Given the crucial need to ensure uninterrupted access to vaccines in the fight against COVID-19, it is fairly evident that the SCRI will work on ensuring smooth vaccine distribution as part of its key priorities.

The manner in which vaccine supply chain resilience will be enhanced can be gleaned from the strategies proposed by the Quad Vaccine Partnership (White House, 2021c). The partnership outlines specific roles for each SCRI country. India will be the core manufacturing hub for vaccines. Japan will work on providing concessional loans to expand vaccine manufacturing, as well as their subsequent export across the Indo-Pacific. Australia will contribute financially to vaccine provision and 'last mile' delivery in the region. This arrangement is based on what the partnership specifies as 'multi-sectoral cooperation across many stages of action . . . drawing on each of our strengths' (White House, 2021c).

Multi-country initiatives like the SCRI and the Quad partnership are also complemented by national strategies focusing on supply chains. Notable among these is India's Production Linked Incentive (PLI) scheme, which provides businesses with financial incentives to invest in local capacity development. The pharmaceutical industry is an important focus of this scheme; the goal being to enhance indigenous outputs of pharmaceutical raw materials and intermediates, like active pharmaceutical ingredients and bulk drugs (Dept. of Pharmaceuticals, 2020). Australia is also providing financial assistance to businesses in the form of grants in order to encourage greater local production of biopharmaceuticals (Business.gov.au, 2021).[5] A similar attempt to expand local capacities in the pharmaceutical industry can be seen in the Biden administration's review of building resilience of critical supply chains (White House, 2021a).

While not being a part of the SCRI directly, the US' efforts in enhancing resilience of supply chains in the Indo-Pacific is expected to be in sync with those of the SCRI, given the presence of SCRI members in the Quad, and their efforts to engage actively in supply-chain reordering in the region. In addition to pharmaceuticals, the US' review of supply chains also highlights the significance of semiconductors, large-capacity batteries, and critical minerals. The identification of these industries, again, is similar to those noted by the Quad, as mentioned earlier.

Securing the supply chains of products which use critical technologies is important for both SCRI and Quad. Critical technologies cover a large range of industrial items. These have the common characteristic of using a great deal of dual-use technologies. Such technologies are essential to industries like semiconductors, telecommunications, large-capacity batteries, information technology (IT), electronics, solar panels, and many others that produce items for daily use. Simultaneously, these industries produce items that advance technological capacities and frontiers of countries, including in defence, thereby rendering themselves significant from a national security perspective.

Similar significance is comprehensible for industrial activities like mining and extraction, particularly for critical minerals (e.g. cobalt, lithium, chromium, and rare-earth elements). As such, it would hardly be surprising if the SCRI invests collective energy into safeguarding supply chains in priority strategic areas, such as critical minerals that are vital for production of smartphones, automobiles, and aircraft. There are already examples of bilateral cooperation within the SCRI in this regard, such as between India and Australia (Bhaskar, 2021). There are

5 Similar incentives are also being provided in order to augment capacities for domestic manufacture of personal protective equipment (PPE) (Australian Govt., 2021).

also wider efforts visible between SCRI members in collaborations with other prominent middle powers (e.g. with the United Kingdom, Korea, and Canada) regarding the development of more alternatives in 5G technology (Sherman, 2020). Over time, these cooperations are expected to widen by including more countries.

Will the SCRI Take Off?

The SCRI is underpinned by a set of fundamental motivations. The first of these is the imperative of making major supply chains, especially those discussed in the earlier section, as resilient as possible by minimising the risks of, and associated to, disruptions. One of the key issues in this regard is the vulnerability which arises from excessive concentration in sourcing. The ostensible goal is to diversify sourcing to various locations, especially in the case of supply chains that are currently sourcing predominantly from one or a few locations. The second motivation behind the SCRI is to relocate production out of mainland China in the longer term. Overseas businesses, such as Japanese manufacturers producing in China, are sourcing heavily from within China as well. For India and Australia, whose businesses are invested relatively less into manufacturing in China, the supply chain worries are mainly over their excessive import dependencies—a worry which Japan shares.[6]

Securing the objectives of the SCRI implies working on significant decoupling of production from China. As mentioned earlier in the chapter, the decoupling is sought both in the light of the experience of the supply shocks inflicted by the production lockdowns in China following COVID-19, and due to geopolitical anxiety over China utilising its near monopoly as the key source for various raw materials, inputs, and components to its strategic advantage.

The anxiety stems from various coercive trade measures taken by China during the last decade to 'punish' countries for taking what it viewed as anti-China postures on various regional and global issues (Wilson, 2021).

Decoupling from China

This desire to reduce dependence on China by diversifying procurement was reflected as early as March 2020 in a statement by then Japanese Prime Minister Shinzo Abe. Following the outbreak of the COVID-19 pandemic in China, and

6 China is the largest source of imports for Australia (25.8%), India (14.3%), and Japan (23.4%) as reflected in the country trade profiles published by the WTO (2021).

focusing on the issues pertaining to reforms of Japan's supply chains, Prime Minister Abe noted,

> There are some concerns over the impacts of the decline in product supply from China to Japan on our supply chains. In light of that, as for those products with *high added value and for which we are highly dependent on a single country* [emphasis added], we intend to relocate the production bases to Japan. Regarding products that do not fall into this category, we aim to avoid relying on a single country and diversify production bases across a number of countries, including those of the Association of Southeast Asian Nations (ASEAN). (Prime Minister of Japan, 2020)

Prime Minister Abe's thoughts underscored Japan's concern over its sourcing dependence on China, particularly regarding certain high added-value products and the necessity of relocating their production back in Japan. For relatively lower value-added products, the route to higher resilience was envisaged as relocation from China to other countries in the Asia-Pacific region. Much of the subsequent thinking around the narrative on resilience of supply chains in the Indo-Pacific has grown out of these thoughts articulated by Prime Minister Abe.

As such, the SCRI aims to work closely with a group of countries to dilute China's power over certain supply chains and prioritise greater local production in SCRI countries. Key industries are those that produce high value-added products and which are high in strategic importance, particularly from a national and regional security perspective. Such priorities become more obvious in light of China's overwhelming presence in these supply chains.

In pharmaceuticals, for example, China is the largest producer of active pharmaceutical ingredients in the world. This makes major global pharmaceutical firms heavily dependent on China for sourcing active pharmaceutical ingredients for the manufacture of finished dosage forms (MHRA, 2017). The vulnerabilities of pharmaceutical supply chains arising from such dependency on China are clear. Similarly, production of critical minerals, processing of rare earths, and electric-vehicle manufacturing are some other strategic industries where China enjoys overwhelming leads over the rest of the world (Kim & Karpinski, 2020). China has similarly rapidly expanded its capacity for making a wide variety of semiconductor chips. In pharmaceuticals, India and Australia, as mentioned before, are focusing on developing large-scale domestic capacities by financially incentivising businesses. At the same time, democracies with strong technological capacities, such as the Quad members, are looking to partner together in the development of critical and emerging technologies. Indeed, collaborations among

'techno-democracies' are extending beyond the Quad in strategic industries like semiconductors, with the US working with Japan and Taiwan so as to reduce future dependence on China (He, 2021).

Finding the economic rationale

Ultimately, supply chains will only move out of China—thereby ensuring their purported resilience, from the perspective of SCRI countries and allies—if such relocation is economically justified. In other words, the costs of relocating from China will have to be compensated by higher benefits from elsewhere.

The cost-benefit calculations would have to be significant given that mainland China continues to have a favourable business environment and remains the key source for multiple parts and components for several industrial supply chains. Sacrificing these advantages poses disincentives to relocating from China, as has been noted by some Japanese businesses (*Business Times*, 2020). Moreover, China's emergence as a major global hub for high-end consumption, including high-tech items, such as smartphones, consumer electronics, and electric vehicles, might in fact encourage some businesses to stay closer to the final demand market, which would also help in avoiding supply-chain disruptions. China's recently adopted 'dual circulation' strategy aims to encourage these perceptions by fostering domestic supply chains (Hofman, 2021).

The challenge is thus for countries to make relocating from China an attractive proposition by providing businesses with favourable cost-benefit scenarios (Palit, 2021). This realisation has encouraged Japan, India, and Australia to announce large-scale financial incentives. Japan's subsidies are aimed at motivating its industries to relocate from China back to Japan, as well as to Southeast Asia and South Asia (e.g. India and Bangladesh), consistent with the goals voiced by former Prime Minister Abe (Sharma & Gakuto, 2020).

India's and Australia's incentives are more focused on expanding domestic capacities.[7] However, in view of the fact that SCRI countries are working together towards the goal of supply chain resilience, the current incentives offered by India and Australia are likely to be viewed by businesses from Japan and from other SCRI-friendly countries as a broader Indo-Pacific compact. Apple has already

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7 India has announced production-linked incentives (PLIs) for a dozen major industries. The schemes offer financial incentives for increasing manufacturing in India (Invest India, 2020). Australia, too, has announced an economic package for enhancing supply chain resilience and enlarging domestic manufacturing capacities (Australian Govt., 2020).

identified India as the future site of one of its major facilities in the Indo-Pacific, reflecting the intention of large firms to reposition supply chains by shifting production out of mainland China.[8]

Notwithstanding the financial packages, the eventual success of SCRI in drawing supply chains out of China, and thereby making them less vulnerable to risks of excessive concentration in a single location, will depend on a variety of factors. Research on prospects of industries actually migrating physically to other locations highlights that the challenges of relocation are largest for industries like automotive components and consumer durables. This is essentially due to China's control over resources and supplies, as well as due to the wider ecosystem on mainland China, which includes availability of capable skilled labour and business-friendly conditions on several parameters (Aylor et al., 2020). These, however, might not be as strategically sensitive as industries like pharmaceuticals, medical devices, telecommunications, semiconductors, and mining. For all these latter industries, the impetus for enhancing resilience is particularly high among the SCRI and Quad countries. The technologies embedded in several products of these industries are sources of national security concern given the information they can capture and pass on to technology owners. For these, the focus is expected to be on creating supply chains afresh by expanding local capacities, rather than making production move physically. Financial incentives are a major influencer in this regard and can hasten the process.

SCRI and Indo-Pacific: Concluding Thoughts

The impact of COVID-19 on supply chains in the Indo-Pacific will be significant. The pandemic has released disruptive forces that are set to fundamentally reorder supply chains. As opposed to pre-COVID-19 supply-chain shifts, which were influenced by systemic industrial transformations, natural disasters, and the US-China trade war, COVID-19 has exacerbated the impetus for physical migration of supply chains out of China. This has come about due to a combination of economic motivation, precipitated by supply disruptions from China, and the geopolitical spur of not allowing China the opportunity of exploiting the influence it exerts on supply chains to its strategic advantage.

Apart from changing the geographical pattern of supply chains in some strategic industries as discussed earlier, initiatives like the SCRI might also contribute

8 Apple is looking at India as a major hub both on account of India's large domestic market, which presents significant prospects for local sales, and due to the fact that the location enables third-country exports (Lovejoy, 2020).

to the growth of new economic rules in the region. The SCRI emphasises the Indo-Pacific—a natural emphasis given that Japan, India, and Australia are all key stakeholders of the region. The US' interest in the Indo-Pacific is equally pronounced. The convergence of interests on the Indo-Pacific is clearly visible through the economic agenda of the Quad. The stated intention to work together in vaccines and critical technology industries by the Quad (Tehan et al., 2021)—coupled with the focus of the SCRI on the use of digital technologies, investment diversification, and investment promotion—may lead to agreements on industrial processes, investment standards, and associated rules. These, over time, might develop into broad benchmarks for the Indo-Pacific as a whole.

Neither the SCRI members nor the Quad group are part of any existing regional trade or economic partnership agreements exclusively among themselves. They are, of course, bilaterally connected through FTAs, such as between India and Japan, and Japan and Australia. Japan and Australia are also in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and Regional Comprehensive Economic Partnership (RCEP) agreements. Whether the common rules surrounding the function and operation of the new and reorganised supply chains would be drawn up based on the features of these existing trade frameworks would be seen over time. Regardless of their founding basis, however, that new rules within the spheres of supply chains of specific strategic industries may emerge is a distinct possibility. This possibility is compounded by the fact that the Quad is looking to acquire a strong and prominent economic role, as was made evident in the declaration by Quad leaders in their latest in-person summit in Washington, in September 2021 (Quad, 2021).

Given the overlapping membership, there is also a distinct possibility that the Quad and the SCRI may converge. However, the Quad has a wider agenda, as articulated in its latest pronouncement, including vaccines, critical technologies, clean energy and climate, connectivity, people-to-people movement, and supply chains. Regarding the latter, this has mostly taken the shape of concerted efforts to safeguard semiconductor supply chains. But if the Quad does go on to acquire a primarily economic character with an emphasis on supply chains, some of the emphasis of the SCRI might get pulled into it. The SCRI might then become embedded within the Quad, with the latter acquiring ownership.

The challenge for regional supply chains to adapt to new rules might, however, become more complex if the SCRI migrates to the Quad. The complexities would increase further when taking into account China's efforts to minimise the economic damages it may suffer from the decoupling attempts of various countries, as well as its attempts to reduce its own economic dependence on

external markets. Localising supply chains within China is an important objective of this effort, as outlined in the dual circulation policy (Lo, 2020), announced soon after the outbreak of COVID-19 in May 2020. For a large number of regional supply chains, the goal of increasing resilience might run into difficulties created by the tension between reorganisation encouraged by the SCRI and Quad, on the one hand, and by China, on the other.

Amitendu PALIT is an economist specialising in comparative economic studies, international trade and investment, political economy, and public policies. He has been with ISAS at the National University of Singapore since 28 April 2008. Prior to joining ISAS, he was with the Indian Council for Research on International Economic Relations (ICRIER), a leading economic policy research institute and think tank in Delhi. He has authored several books, including *The Trans Pacific Partnership, China and India: Economic and Political Implications* (2014), *China India Economics: Challenges, Competition and Collaboration* (2011), and *Special Economic Zones in India: Myths and Realities* (2008, co-authored). He is a columnist for India's well-known financial daily *Financial Express* and a contributor for various newspapers and major online public policy platforms such as the *Asia Pacific Bulletin*, *China Daily*, *Business Times*, *East Asia Forum*, and *Pacific Economic Cooperation Council* (PECC). He is a visiting faculty for several leading management and business schools and has been a consultant for the Commonwealth Secretariat, International Labour Organization, United Nations Development Programme, and the Indian Institute of Foreign Trade.

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The Semiconductor Industry in the Age of Trade Wars, COVID-19, and Strategic Rivalries

Willem THORBECKE

Abstract

Semiconductors are vital for countless applications. The pandemic has generated a surge in IT spending and has resulted in a shortage of semiconductor devices. The semiconductor industry is also facing geopolitical challenges, as many fear the concentration of production in East Asia. This chapter examines the challenges the industry faces and suggests possible solutions.

Integrated circuits are vital not only for smartphones, computers, and other electronic goods, but also for countless other products. Microchips power automobiles, toasters, robots, refrigerators, and airplanes. In addition, cutting-edge chips drive artificial intelligence and other applications that are crucial to national defence. It is little wonder that policymakers focus on securing a stable supply of semiconductor devices.

In 2017, the former president of the United States (US), Donald Trump, launched a trade war against the Chinese semiconductor industry. The Trump administration initiated an unfair trade investigation into opaque subsidies to Chinese semiconductor firms. It then tightened the screws for national security reasons, forbidding sales by US firms to Huawei, Semiconductor Manufacturing International Corporation (SMIC), and other Chinese firms. It also restricted the sale of US technology to firms abroad that supplied semiconductors to these entities.

As Trump's actions were sowing uncertainty in the semiconductor industry, the COVID-19 pandemic whipsawed the sector. When the coronavirus news hit the world stage in February 2020, the bleak macroeconomic outlook caused semiconductor stock prices to fall by 30% in Taiwan and by more in South Korea and Japan. Automakers facing lockdowns cancelled orders for chips. As individuals began working from home, spending on information and communication technology (ICT) soared. This increased the demand for chips. When demand for automobiles recovered later in 2020, semiconductor manufacturers lacked chips

to sell to automakers. The shortage of these semiconductor devices that might cost only 2 USD forced car plants to shutter production (see, e.g. Song, 2021).

The next section recounts the history of the semiconductor industry from its founding until the present. Section 3 presents evidence of how the COVID-19 crisis has impacted this sector. Section 4 draws policy lessons.

A Brief History of the Semiconductor Industry

The transistor was invented at Bell Labs in New Jersey in 1946. Tadashi Sasaki was in New Jersey at the time. Sasaki had studied electrical engineering at Kyoto University and Dresden University and worked with Karl Spangenberg from Stanford University on minimising the space between a cathode-emitting negatively charged electrons and the gate leading to the electrode (Sasaki, 1994). Sasaki grasped the potential of the transistor and sought applications for consumer goods. While US electronics firms serviced lucrative military contracts, Japanese firms were not allowed to and focused instead on hyper-competitive consumer markets.

Sasaki envisioned revolutionising consumer electronics by adding transistors to an integrated circuit. This would enable goods to be miniaturised. He encouraged his company, Hayakawa, to produce pocket calculators (Sasaki, 1994). His engineers doubted his plan but studied the technology at Osaka University (Johnstone, 1999). Hayakawa decided they needed to use complementary metal oxide semiconductor (CMOS) chips to save power. Japanese companies were unwilling to produce these, so Sasaki turned to the American company Autonetics, a company providing inputs to missiles, fighter jets, and other weapons. These applications were lucrative, and producing integrated circuits for calculators offered low margins. Sasaki nevertheless convinced Autonetics by arguing that they would learn by doing, improving yields, and increasing profits.

In 1969, Hayakawa introduced the Sharp QT-8D calculator with four integrated circuits produced by Autonetics that each contained 900 transistors. Hayakawa then asked RCA, a major American electronics company, to produce liquid crystal displays (LCDs) for Hayakawa's calculators to save energy. RCA refused because it considered consumer electronics to be unprofitable. Hayakawa thus had to master producing LCDs itself, and Sasaki stated that this was one reason why Hayakawa succeeded (Sasaki, 1994). By 1975, Hayakawa (renamed Sharp) would produce 10 million calculators.

As calculator production soared, Japanese semiconductor companies that had previously refused to supply Hayakawa now complained to the Japanese Ministry of International Trade and Industry (MITI) that Japanese producers were purchasing integrated circuits from the US. MITI then prohibited Japanese companies from buying US microchips (Johnstone, 1999). Autonetics, which had been promised the benefits of the learning curve, was thus no longer able to produce for Sharp.

By then, Sharp and other Japanese companies had mastered CMOS technology, while US companies now preferred PMOS and NMOS (positive and negative channel metal oxide semiconductor) chips. CMOS was developed by the US company Fairchild Semiconductor. Sasaki and other Japanese engineers saw the potential of CMOS to reduce power requirements and facilitate miniaturisation. US firms missed the potential that CMOS offered for the consumer market, and focused instead on the more powerful PMOS and NMOS technologies and military applications. As such, when the industry standard in the 1980s turned to CMOS, Japanese firms were in the pole position.[1] Bown (2020) reported that in 1980, three of the four leading semiconductor firms by revenues were American, while in 1990, three of the top four were Japanese. Bown also noted that Japanese firms leapfrogged in the dynamic random access memory (DRAM) sector, with their market share rising from less than 30% in 1978 to over 75% in 1986 (see also Irwin, 1996).

As Bown (2020) noted, US manufacturers responded to the Japanese juggernaut by lobbying for protectionism. They initiated a Section 301 case against Japan, arguing that US firms lacked access to the Japanese market. One of their complaints was that the Japanese government had, in the past, overtly excluded US semiconductor firms from the Japanese market. The case of Autonetics not being allowed to supply Hayakawa was an example of this. The US government also launched three antidumping cases, claiming that Japanese firms sold chips in the US below their fair value. Bown reported that the US and Japan reached an agreement in 1986, hinting that Japan would allocate 20% of the Japanese semiconductor market to US firms and that Japanese firms would limit export quantities and raise prices. Determining market shares by government decree represented a sea change for US trade policy (Irwin, 1996).

The voluntary export restraint that Japan agreed to opened a door for South Korean firms. South Korea faced the constant threat of invasion from North Korea. South Korean President Chung-Hee Park prioritised economic development

1 Voinigescu (2013) noted that by 2011, 99% of chips are manufactured using CMOS.

as a means of facing this threat. His government allocated bank loans to firms in order to export and only continued directing loans to successful exporters. Korean workers took the export imperative seriously and worked hard to make their companies successful (Pecht et al., 1997).

Samsung founder, Lee Byung-Chull, prioritised DRAM chips as an area where Samsung could export and succeed. Investment requirements are heavy for semiconductors, and Samsung was able to borrow because of the implicit government guarantees. Samsung purchased DRAM technology in 1983 from the American company Micron. Korean engineers then studied semiconductor technology day and night in the US. On their return to Korea, they attained high yields. While Japanese firms were constrained to export at higher prices and limited quantities to the US, Korean firms could sell at these higher prices without any quantitative restrictions. Samsung channelled the revenues that resulted into research and development (R&D) and capital formation. In the early 1990s, it became the leading producer of DRAMs, a distinction it retains in 2021. The second leading producer in 2021, SK Hynix, is also Korean.

While Korea dominates in DRAM and other memory chips, Taiwan has focused on logic chips. As South Korea faced the threat of invasion from North Korea when it developed its semiconductor industry, Taiwan faced the threat of war with China. In the 1970s, Taiwan was decimated by inflation, following the 1973 oil crisis, and had lost access to Japanese capital goods in 1974. In this crisis environment, it turned to economic development as a means of national survival. Many Chinese researchers in the US sympathised with Taiwan and shared their expertise free of charge. Wen-yuan Pan, director at RCA's David Sarnoff Laboratories, chaired the technical advisory committee (TAC) of researchers from leading US universities and firms.

Pan recommended that Taiwan develop a semiconductor industry, and the TAC advised that Taiwan begin with a mature technology. As Lin and Rasiah (2014) noted, Pan recommended that Taiwan spend an enormous sum for its economy (10 million USD). Taiwan established the Industrial Technology Research Institute (ITRI) to oversee its technology development. Taiwan purchased semiconductor technology from RCA, and ITRI recruited forty engineers. Some held PhDs from US universities. These engineers worked hard to master the technology, and ITRI spun off the United Microelectronics Corporation (UMC) in 1979. ITRI continued to nurture technological development and, in 1987, also created the Taiwan Semiconductor Manufacturing Company (TSMC). As Lin and Rasiah discussed, TSMC did not design integrated circuits itself but rather made these based on its customers' specifications. According to Bown (2020), in 2020, TSMC is the third largest semiconductor firm by revenue in the world.

Malaysia sought to imitate Korea and Taiwan in using industrial policy to develop a cutting-edge semiconductor industry. However, unlike Korea and Taiwan, Malaysia faced no existential threats.[2] Malaysia established the Malaysian Institute of Microelectronics Systems (MIMOS) in 1985 to function as ITRI did in Taiwan. MIMOS created the semiconductor firm Silterra in 2000. However, as Rasiah (2017) documented, the Malaysian government did not choose the most qualified candidates to lead Silterra and other institutions. Since the 1970s, Malaysia sought to promote indigenous citizens (*Bumiputera*) over Malaysians who are ethnically Indian or Chinese. For instance, Rasiah noted that Malaysia did not choose Loh Kin Wah, an ethnic Chinese, the managing director of the German company Qimonda, and best placed candidate for the job, to head Silterra. The government also withheld grants from the most dynamic electronic firms if they were not led by a Bumiputera, and continued bestowing benefits on indigenous firms even if their performance was poor. Malaysia's emphasis on redistribution generated rent-seeking activity, and its semiconductor industry never progressed to higher value-added activities such as design, R&D, and manufacturing.

China has become the world's largest consumer of semiconductors and uses these to produce final electronics goods. Bown (2020) noted that 90% of smartphones, 67% of smart televisions, and 65% of personal computers are made in China. Bown also reported that China's exports of semiconductors now comprise 20% of the world's total. These exports, however, are lower-end chips, while its imports are cutting-edge devices. The Chinese government is using opaque subsidies to promote its domestic semiconductor industry and thereby pursue self-sufficiency.

Bown (2020) recounted how these subsidies and national security concerns caused the Trump administration to launch a trade war against the Chinese semiconductor industry. In 2017, the US government initiated a Section 301 investigation into unfair trade practices. This resulted in 25% tariffs being imposed upon Chinese chip imports. In 2019, the US targeted the Chinese company Huawei. Huawei is a leading player in producing equipment for fifth-generation (5G) telecommunications networks. The US feared that Huawei might be required to provide sensitive military and civilian data that it obtained to the Chinese government. The Trump administration then restricted the sale of US chips to Huawei. However, Huawei was able to obtain sufficient chips from Taiwan, South Korea, and other sources. The US then said that any foreign semiconductor

2 Yoshitomi (2003) observed that Malaysia had overcome existential threats from rural unrest.

manufacturer that supplied Huawei would no longer have access to US tools and technology. In 2020, the US also prohibited domestic firms from selling to SMIC without explicit government approval. In the midst of this dislocation, the coronavirus crisis hit the semiconductor sector.

Investigating How the Coronavirus Shock Impacted the Semiconductor Industry

To investigate how COVID-19 is affecting the semiconductor industry, this chapter examines the fluctuations of stock returns. Finance theory teaches that stock prices equal the expected present value of future cash flows. Black (1987, p. 113) observed that

> The sector-by-sector behavior of stocks is useful in predicting sector-by-sector changes in output, profits, or investment. When stocks in a given sector go up, more often than not that sector will show a rise in sales, earnings, and out-lays for plant and equipment.

The response of stock prices should thus provide information about how sectors are being affected.[3]

The coronavirus shock began causing stock prices around the world to fall on 19 February 2020. An equation is thus estimated explaining stock returns until 18 February 2020, and then actual out-of-sample values of the explanatory variables are used to predict stock prices during the crisis period. The difference between actual stock prices and predicted stock prices may shed light on how the crisis is affecting the sector.

The performance of the Taiwanese semiconductor sector is investigated since Taiwan is the most technologically advanced producer of semiconductors. The performance of two key downstream sectors, consumer electronics and automobiles, is also examined. The data for Korea are also included, since it is a major exporter of both consumer electronics and automobiles.

To explain *sectoral stock returns*, the returns on the countries' aggregate stock markets, the return on the world stock market, the price of oil, the nominal exchange rate relative to the US dollar, and a measure of interest rates are included. There is a long tradition in finance of using the return on a country's aggregate stock market to capture the impact of economy-wide factors on

3 Stock prices can also overreact, so there is a need for caution when drawing inferences from stock return data.

individual firms or sectors (see, e.g. Brown and Warner, 1980, 1985). The return on the world stock market then captures the impact of global factors on individual entities. The price of oil has been found by many to be helpful in explaining Asian stock returns (see Thorbecke, 2019). The exchange rate is included to capture the sectors' exposure to exchange rate changes. The interest rate is included to capture the influence of monetary policy on stock returns.

The following equation is estimated:

$$\Delta R_{i,t} = \alpha_0 + \alpha_1 \Delta R_{m,t} + \alpha_2 \Delta R_{m,World,t} + \alpha_3 \Delta P_{oil,t} + \alpha_4 \Delta er_t + \alpha_5 \Delta MP_t,$$

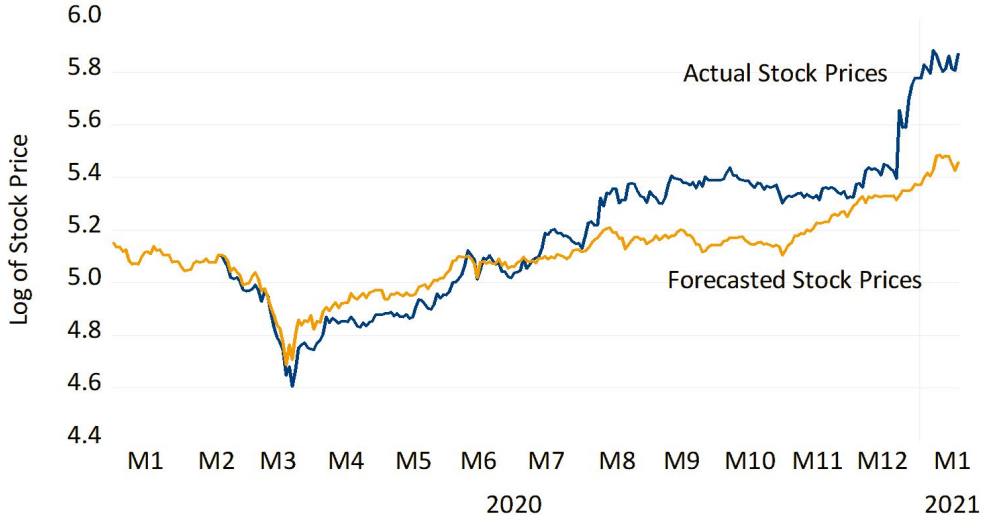
where

- $\Delta R_{i,t}$ is the change in the log of the stock-price index for sector *i*,
- $\Delta R_{m,t}$ is the change in the log of the price index for either the Taiwanese or the Korean aggregate stock market,
- $\Delta R_{m,World,t}$ is the change in the log of the price index for the world stock market,
- $\Delta P_{oil,t}$ is the change in the log of the spot price for Dubai crude oil,
- Δer_t is the change in the New Taiwan dollar/US dollar exchange rate (for Taiwan) or the Korean won/US dollar exchange rate (for Korea), and
- ΔMP_t represents the change in the Taiwan Central Bank discount rate (for Taiwan) or the Bank of Korea base rate (for Korea).

The data are obtained from the Datastream Database and from the websites of the Central Bank of the Republic of China and the Bank of Korea.

The above equation is estimated using daily data over the 19 January 2001 to 18 February 2020 period. Actual values of the right-hand side variables over the 19 February 2020 to 19 January 2021 period are then used to forecast stock prices. Figure 1 presents results for the Korean consumer electronics sector. Actual returns fell more than 50% beginning on 19 February 2020. Although the forecasted values plummeted due to the deteriorating macroeconomic environment with the advent of the crisis, actual stock prices fell more than forecasted based on the macroeconomic variables and remained below forecasted values until July 2020. Stock prices then soared, and by 19 January 2021, they were more than 70% above pre-crisis values and more than 40% above forecasted values. As individuals were forced to work from home, their demand for consumer electronics and other ICT goods soared. This, in turn, generated the large stock-price gains.

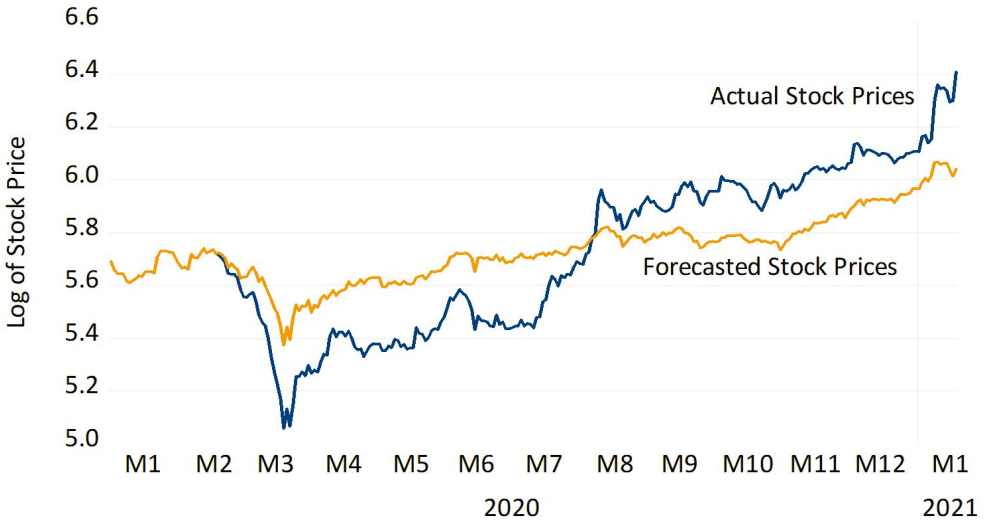
Figure 1. Actual and forecasted stock prices for the Korean consumer electronics sector



Source: Datastream Database and calculations by the author.

Figure 2 presents results for the Korean automobile sector. Actual returns fell almost 70%, beginning on 19 February 2020. The forecasted values, due to the deteriorating macroeconomic environment, fell only half as much. Actual stock prices remained below forecasted stock prices until August 2020. They thereafter posted steady gains, and by 19 January 2021, they were almost 70% above pre-crisis values, and almost 40% above forecasted values. As many were shuttered at home, the outlook initially looked abysmal for the automobile industry. However, with the global recovery and peoples' desire to avoid public transportation, the prospects for the auto industry brightened anew.

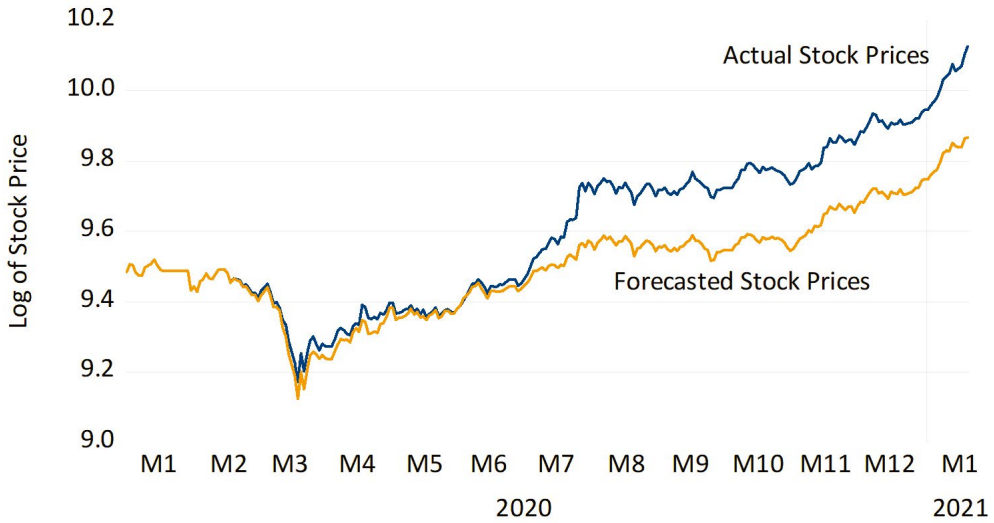
Figure 2. Actual and forecasted stock prices for the Korean automobile sector



Source: Datastream Database and calculations by the author.

Bown (2020) noted that 75% of semiconductor devices flow to electronics products, and the other 25% go to automobiles and other applications. With the outlook for electronics and automobiles improving, one would expect the semiconductor industry to also benefit. Figure 3 confirms this. Actual returns on the Taiwanese semiconductor sector fell about 30% with the advent of the crisis. Actual returns remained close to predicted returns until the beginning of July 2020. Actual returns then far outpaced predicted returns, and by 19 January 2021, they were almost 70% above pre-crisis values, and almost 30% above forecasted values. The semiconductor industry is thus profiting during the pandemic.

Figure 3. Actual and forecasted stock prices for the Taiwanese semiconductor sector



Source: Datastream Database and calculations by the author.

Policy Lessons

Semiconductors are vital for the world economy. Though they were invented in the US, their manufacturing has migrated to South Korea, Taiwan, and other Asian countries. The US and its Western allies now perceive the risks of having the production of such crucial components based so far away. Earthquakes, fires, or wars could cut off producers in the West from these vital inputs. The US and the EU are thus seeking to nurture domestic semiconductor manufacturing (see, e.g. Fleming et al., 2021). As Eric Schmidt, who had served as CEO for Google between 2001 and 2011, observed in an interview, they are unlikely to succeed merely by throwing money at the problem (Tanaka, 2021).

The successes of Japanese, Korean, and Taiwanese firms offer some lessons. First, lucrative government contracts are less likely to produce a strong industry than competing in world markets. After World War II, US electronics firms developed transistors, CMOS semiconductors, LCD displays, and countless other technological breakthroughs. These firms were often coddled by defence contracts and thus faced little pressure to convert these technologies into marketable products. Asian firms, on the other hand, focused on exporting and competing in consumer-goods markets. This discipline forced them to choose technologies carefully and adapt them to make profitable products.

A second lesson is that entrepreneurs are essential. Tadashi Sasaki had the vision to use integrated circuits to miniaturise calculators. This led to hundreds of millions of calculators being sold. Byung-Chull Lee took risks to produce DRAM chips. His success in this area helped make Samsung a company that in 2021 has a market capitalisation of 400 billion USD. Recounting the factors such as good policies and educated workers that contributed to the East Asian miracle between the 1960s and the 1990s, Yoshitomi (2003) concluded that entrepreneurs were paramount. By taking risks and translating new ideas into productive activities, they sustained technological progress and drove economic growth.

A third lesson is that industrial policy is more likely to succeed when citizens view their national survival to be at risk and therefore unite for the national good. This may have been the case for South Korea and Taiwan facing the threat of invasion from neighbours. Economic development was viewed as imperative; workers, entrepreneurs, government officials, and outside advisors worked together to achieve it. When, as in the case of Malaysia, redistribution is a primary goal of government, industrial policy can lead to rent-seeking waste and not produce a competitive industry. The implication is not that countries should create a situation where their survival is at stake, but that countries without existential threats should be aware that industrial policy may generate rent-seeking losses.

A fourth lesson is the importance of education and technology transfer. Tadashi Sasaki was well educated and quickly sensed the technologies that his firm should invest in. Engineers in Korea and Taiwan were relatively well-educated and absorbed know-how from their counterparts in America. This bridged the knowledge gap until they acquired the requisite manufacturing experience.

A fifth lesson is the necessity of providing firms with targeted and calibrated incentives. Malaysia often did not let Bumiputera firms fail even when their performance was poor. On the other hand, Hausmann and Rodrik (2003) showed that the Korean government stopped providing benefits to firms that did not succeed at exporting. Proper incentives can help industrial policy to achieve its target.

A sixth lesson is that protectionism can be counterproductive. Japan's refusal to let firms like Autonetics continue selling semiconductors to Japan and America's actions against chip firms in Japan ultimately weakened the semiconductor industries in both countries.

A seventh lesson is that cooperation between academia, industry, and government research institutes can be valuable. Not only did the TAC in Taiwan contain

leading professors, but Taiwanese science parks enabled fertile interactions between universities, businesses, and the government.

Many Western countries are desirous of building vibrant semiconductor manufacturing sectors. They recognise that in the event of war or natural disaster, they could be cut off from East Asia's semiconductor supplies. Developing semiconductor manufacturing capacity requires careful thought and planning. Simply observing that the Korean and Taiwanese governments invested money into semiconductors and declaring that Western governments should follow suit will prove insufficient.

Another lesson from the COVID-19 experience is that firms which make use of semiconductors should move beyond just-in-time inventory management. As the pandemic emerged, demand for automobiles fell rapidly and recovered at a similar pace. It was hard for automakers to foresee how their semiconductor needs would change. Keeping excess inventory for precautionary reasons would be wise. Also, achieving a greater understanding of their own supply chains, and their inherent vulnerabilities, could save companies a lot of money. During the pandemic, it became clear that a fourth-tier supplier could suffer difficulties, which sometimes reverted through the entire supply chain, causing multiple delays. It is therefore clear that firms need careful planning and adequate preparations to maintain resilience in the face of wars, natural disasters, pandemics, and other disruptions.

Willem THORBECKE is a senior fellow at the Research Institute of Economy, Trade, and Industry. Prior to this, he was a senior research fellow at the Asian Development Bank Institute and a professor at George Mason University. He has written many papers investigating the determinants of trade flows in Asia and the rest of the world and the spillovers that result from trade.

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Digital Investment and Post-Pandemic Recovery in ASEAN

Sineenat SERMCHEEP

Abstract

Digital investment is a crucial factor for ASEAN's post-pandemic recovery, as well as long term growth and development in the digital era. It boosts ASEAN's digital competitiveness and assists the region in reaping the benefits of the digital economy. To be successful in attracting digital investment, policies, regulations, and measures that influence the decisions of potential digital investors are required.

Introduction

The COVID-19 pandemic has severely disrupted economic activities around the world, and Southeast Asia is no exception. This unprecedented pandemic has caused a devastating impact on the ASEAN economy. According to World Bank data, the outbreak caused a 5.59% contraction of ASEAN GDP in 2020. The pandemic also had a significant impact on trade and investment. In 2020, the total trade of six ASEAN countries, namely, Cambodia, Indonesia, Malaysia, the Philippines, Singapore, and Thailand, dropped by 13.68%. Foreign direct investment (FDI) flows in the region also recorded a 25% contraction to 136 billion USD in 2020 (UNCTAD, 2021).

The restrictive measures imposed in response to COVID-19, such as lockdowns, stay-at-home orders, temporary business closures, and travel restrictions or prohibitions, have impacted both ASEAN consumers and businesses. ASEAN has seen a decline in tourism flows, air travel disruption, and a reduction in consumer and business confidence (ASEAN Secretariat, 2020a).

The pandemic has also accelerated an existing trend of digital transformation in the region. The government measures to contain COVID-19 have pushed firms towards digitalisation, and increased online operation, so as to meet the increase in demand. Digitalisation has also enabled businesses to enter new markets via online platforms, as well as to integrate logistics services, and to automate production facilities. The outbreak of the pandemic made the adoption of digital

technology particularly essential as a means of mitigating the negative effect of lockdown policies and adapting to the new environment for future growth. The pandemic has also accelerated consumer use of digital technologies. In one year, internet usage in Southeast Asia increased by 40 million new users, reaching 400 million users in 2020, equivalent to just under two thirds of the total population (Google et al., 2020).

The promotion of the digital economy is a critical driver of ASEAN's economic recovery, with digital development viewed as essential for the region. Digital technology has caused significant change all over the world. Countries such as China and the United States (US) have reaped the benefits of the digital revolution and emerged as winners in the digital world. ASEAN is still in the early stages of digital development, but it has an enormous potential to become one of the world's leading digital economies (A. T. Kearney, 2015; Bain & Company, 2018).

ASEAN is one of the world's key economies, ranking third in terms of population, after China and India, and ranking fifth in terms of GDP after the US, China, Japan, and Germany, in 2019 (ASEAN Secretariat, 2020b). However, the region is not a key digital economy yet. ASEAN's digital economy lags behind its global peers, accounting for only 7% of GDP, in comparison to 16% in China, 27% in Europe, and 35% in the US (Bain & Company, 2018).

ASEAN has the potential to leap to the forefront of the fast-moving global digital economy because many of the fundamentals of digital development are already in place. First, ASEAN has a strong and vibrant economy, with a GDP of 3.2 trillion USD in 2019 and an annual average real GDP growth rate of 5.7% from 2000 to 2019 (ASEAN Secretariat, 2020b). Second, ASEAN has a sizeable and growing internet user base. This is due to the fact that the majority of ASEAN countries had an adult literacy rate of more than 94% in 2018 (ASEAN Secretariat, 2020b). Furthermore, the youth population accounts for 34% of ASEAN's total population of 654 million (ASEAN Secretariat, 2021c), and these digital natives are critical to driving innovation and facilitating ASEAN's digital transformation. Third, ASEAN's investment into digital infrastructure, which is critical for digital development, has made significant progress, with over 100 billion USD invested in 2014, and a 15% increase in 2015 (A.T. Kearney, 2015). According to World Bank data, Indonesia's investments into information and communications technology (ICT), including private participation, reached 204 million USD in 2016 and 385.29 million USD in 2017. Myanmar has also seen significant investment into digital infrastructure, with an all-time high of 1.618 billion USD in 2017 and a new low of 119 million USD invested in 2018. Fourth, the region's growing integration under the ASEAN Economic Community (AEC) and the implementation of the Regional

Comprehensive Economic Partnership (RCEP) benefit ASEAN's digital economy through greater economies of scale.

Although ASEAN governments have made significant investments into digital infrastructure, there is still much room for improvement in order to keep up with new technologies, serve the increasing regional demand for internet usage, and bridge the digital divide within ASEAN. One of the primary reasons for insufficient development of telecommunication networks, which is required for ASEAN to become a leading digital community and economic bloc, is a lack of infrastructure investment (ASEAN Secretariat, 2021a). According to the ASEAN Secretariat (2021b), the region requires approximately 14 billion USD per year in 5G infrastructure investment. Thus, attracting more digital foreign direct investment (FDI) is one way for ASEAN to reap the benefits of digital development, recover from the COVID-19 pandemic, and maintain itself as the leading digital economy for future growth. According to Bain & Company (2018), the radical development of a digital economy has the potential to power and accelerate intra-regional trade and growth and could add up to 1 trillion USD to ASEAN's GDP by 2025.

Attracting digital FDI requires different policies, regulations, and measures. Digital firms' business models differ from those of traditional businesses, and their decision to invest relies heavily on data and technology (Stephenson, 2020; Stephenson & Sen, 2020). Thus, it is important to fully analyse what the potential policies for attracting digital investment in ASEAN are. This paper aims to consider the economic effects of the pandemic on ASEAN (Section 2), examine the role of digital investment in addressing the recovery of the ASEAN economy (Section 3), discuss the potential policies on digital investment promotion to ensure said recovery is sustainable (Section 4), and draw some conclusions for digital investment in the region (Section 5).

Impacts of COVID-19 on the ASEAN Economy

The COVID-19 outbreak has impacted the ASEAN economy on multiple fronts, including supply chains, the service sector, foreign direct investment, and digital technology adoption. This section investigates the pandemic's effects and how digital technology can help to mitigate them.

ASEAN has played an important role in global supply chains in recent decades, with Vietnam, Thailand, and Malaysia serving as large-scale manufacturing hubs. Currently, the region serves as a major manufacturing base for the automotive, computers, electronics, and clothing industries (Mazumdaru, 2021). As such, when lockdown measures and strict restrictions were imposed to control the spread of the virus, the reduced business activity and operations had wide-

ranging effects. The resulting factory closures in many ASEAN countries—and ensuing manufacturing capacity reductions, particularly in Thailand and Vietnam—disrupted global supply chains.

Manufacturing companies are adopting digital technology, such as cloud, mobile platforms, Internet of Things (IoT), and data analytics, to help automate manual processes and create new ways to move products (Goel, 2021). Multinational corporations (MNCs) may reshape their global supply chains in ASEAN to be more resilient by reshoring or nearshoring to reduce complexity and interdependence in the global supply chain networks and by diversifying supply, operations, and distribution channels to avoid concentration (UNCTAD, 2021). ASEAN will be impacted in both instances—negatively, by outward FDI due to reshoring to base countries, and positively, by inward FDI due to investment diversification from other locations.

COVID-19 control measures, such as restrictions on people's movement and social distancing, have directly disrupted traditional services, such as travel and tourism, hotels and restaurants, business, and aviation (ASEAN Secretariat, 2020a; Kimura et al., 2020). ASEAN is heavily reliant on the tourism industry, which the World Travel and Tourism Council estimates accounted for 12% of total ASEAN GDP (380 million USD) in 2019. ASEAN is one of the regions most affected by the global tourism slump. By utilising digital technologies such as IoT and robots, hotels can improve the safety and security of their services. During the pandemic, augmented, virtual, or mixed reality (AR, VR, and MR) could help in the provision of alternative tourism experiences known as virtual tourism. These digital technologies can provide viewers with a seamless, uninterrupted interactive experience from their own locations (Pillai, 2021).

The COVID-19 pandemic has accelerated the growth of many modern services, including digital financial and insurance services, telecommunications, computers, and information services, all of which are new potential engines of ASEAN growth (Sermcheep, 2019). ASEAN consumers and small and medium enterprises (SMEs) have embraced digital financial services like never before, resulting in increases in remittance flows (43%), digital payments (3%), insurance (30%), and investment (116%) (Google et al., 2020).

The COVID-19 pandemic disrupted FDI flows into ASEAN, resulting in a 25% decrease to 137 billion USD in 2020. Lockdown measures, supply chain disruptions, falling corporate earnings, recurring waves of COVID-19, economic uncertainty, and the postponement of investment plans have all contributed to this sharp drop. Despite the decline, ASEAN remained an attractive investment destination, and although the actual amount of investment decreased over this period, the

region's share of global FDI increased from 11.9% in 2019 to 13.7% in 2020. FDI in the manufacturing sector fell by 55% and also lowered in service industries, such as finance, hospitality, tourism, real estate, and construction. The overall decline in regional FDI is offset partially by a resilient FDI in infrastructure-related industries, such as electricity, information, and transportation and storage, as well as digital economy industries, such as digital technologies, e-commerce, and online activities (UNCTAD, 2021).

For decades, FDI has been a key driver of ASEAN's growth. This growth channel was disrupted during the COVID-19 outbreak; however, ASEAN countries are still attempting to attract FDI and maintain the momentum of FDI-led growth for their countries. Falling company performance and the phenomenon of reshoring will result in lower FDI in the post-pandemic period, leading to increased competition for FDI attraction. For countries to be attractive for FDI in the digital economy, they must have a good infrastructure and network.

The pandemic has accelerated the adoption and growth of digital technology in most of related sectors. According to Google et al. (2020), six from seven leading digital economy sectors in ASEAN—namely, e-commerce, food delivery, online media, digital financial services (insurance, investment, payment, and remittance), HealthTech, and EdTech—have experienced continued growth or rapid expansion due to the COVID-19 pandemic. The seventh sector, which the pandemic temporarily set back is, unsurprisingly, online travel (Google et al., 2020).

The digital economy remains resilient in six ASEAN countries—namely, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. This includes the sectors of e-commerce, transport and food delivery, online travel, and online media. They reached a gross merchandise volume (GMV) of 100 billion USD in 2020. The value of this digital economy is expected to reach 300 billion USD in GMV by 2025, despite a challenged environment (Google et al., 2020).

HealthTech and EdTech have emerged as new frontiers in ASEAN's digital economy. The use of telemedicine platforms increased fourfold, and they were able to retain their users in the post-lockdown period, with investment into such platforms more than doubling during the pandemic. Widespread collaboration between existing providers and telemedicine start-ups, as well as continued interest from investors, and stronger regulatory and policy support from regulators have all contributed to the future commercialisation of HealthTech in ASEAN. Meanwhile, EdTech funding tripled in 2019, with the majority of funds going to online learning platforms and student adoption of EdTech increasing more than threefold. EdTech has the potential to expand further in the post-

pandemic period, with potential barriers being connectivity and affordability. Many people, particularly those living in rural areas in the region, continue to face difficulties with regard to universal access to, and affordability of, digital devices and networks (Google et al., 2020).

Because of their resilience to the economic slowdown caused by the COVID-19 pandemic, these digital-related sectors have the potential to become key drivers of ASEAN's economic recovery. However, ASEAN is still in the early stages of digital development, with much room for improvement. In order to boost further digital investment and innovation in ASEAN, the region must develop a digital-friendly ecosystem. Promoting ASEAN digital start-ups could be a successful strategy for stimulating innovation and creating new users and service providers.

In sum, the spread of COVID-19 has severely impacted the region, resulting in a significant economic slowdown. However, some sectors of the digital economy are resilient to this shock and may become the growth engine in the post-pandemic period. ASEAN's continued digital technology development contributes to making digital tools more accessible for businesses to adopt. The more they do so, the more they are able to survive such shocks and compete in the post-pandemic economy. This development process requires digital investment.

Role of Digital Investment in Facilitating ASEAN Recovery

Role of digital investment on digital development

Digital investment has played an important role in the development of the digital economy. According to UNCTAD's (2017) digital development strategy, global digital firms' investment can contribute to host countries' digital development through two channels: investment in digital infrastructure and investment in digital firms (Table 1).

Developing digital infrastructure is the first step in digital development because it leads to improved digital connectivity, which is the foundation of the digital economy. Digital FDI is an important source of capital and technology for infrastructure development and network deployment. This is particularly true for developing countries looking to fill infrastructure gaps and improve their digital connectivity. As countries expand their digital coverage, they need investment in digital infrastructure to keep up with evolving technology and so as to expand capacity in order to meet rising demand (UNCTAD, 2017).

A lack of investment in digital infrastructure is a major challenge for ASEAN, particularly for Cambodia, Lao People's Democratic Republic (PDR), and Myanmar,

which have significantly lower levels of digital development than the rest of ASEAN (ASEAN Secretariat, 2021a). Increased investment into digital infrastructure can help to close the digital divide by improving network access and making connectivity more affordable across ASEAN. This also helps in the achievement of the United Nations' Sustainable Development Goals (SDGs), namely, Goal 9 on building resilient infrastructure, promoting sustainable industrialisation, and fostering innovation, and specifically Target 9.c, which aims to increase access to information and communications technology and to provide universal and affordable access to the internet (United Nations, 2015).

Second, digital firms' investments in businesses such as local platforms, data centres, and in training and capacity-building helps to stimulate demand for digital services, while also increasing the availability of digital services in the local ecosystem. In comparison to digital infrastructure investment, the digital content and services industry requires less capital for its development. However, critical investment components are required to support content creation, store and deliver content locally, and build or improve related services, such as financial and postal services (UNCTAD, 2017).

Table 1. Digital development and investment

	Digital infrastructure	Digital firms	Wider digital adoption
• Typical investment needs	• International, national, last-mile connectivity • Internet exchange points (IXPs)	• Local platforms (e.g. social networks, e-commerce) • Local enterprise development • Data centres • Training and capacity-building	• ICT adoption/ devices • Training

• Typical investors	• (Mobile) network operators and internet service providers (ISPs) • Global digital firms • Governments	• Global digital firms • Data centre providers • Venture capital, private equity, other funds • Local firms (e.g. media firms)	• Local businesses • Public institutions and governments
• Relevance of investment policies and investment support measures	• Sector-specific foreign investment rules • Privatisations • Public-private partnerships • Investment-related policies (e.g. competition)	• Innovation hubs, incubators • Enabling environment for innovative forms of financing	• E-government investment facilitation • Business linkages programmes supporting participation in global value chains (GVCs)

Source: UNCTAD (2017)

Foreign firms have played an important role in accelerating ASEAN's digital transformation process by serving as investors, technology users or providers, and manufacturers. They also contribute by training the local workers, being influencers of digital adoption in SMEs, and becoming digital ecosystem enhancers (ASEAN Secretariat, 2021b). On the supply side, MNCs play a role by building digital infrastructure and investing in digital firms in their host countries. They also manufacture industrial hardware and provide technology to clients in local markets, while some also provide digital content and services to local customers. On the demand side, some digital firms require the use of local digital services to support their operations, which generates demand in the host countries. Some MNCs also set up research and development (R&D) facilities, technology hubs, and centres of excellence in the region, which helps with training and capacity-building.

MNCs are always equipped with capital and technological capacity, and they can adopt advanced digital technology far more swiftly than local companies. Their adoption of a given advanced technology has the potential to influence local and other foreign firms in local markets to adopt this same technology, particularly in the case of SMEs with vendor relationships with MNCs. MNCs also contribute to the improvement of ASEAN's digital ecosystem. With a more developed digital

ecosystem, local start-ups, which are a key driver of innovation in the digital economy, can expand more rapidly (ASEAN Secretariat, 2021b).

Current state of digital development and investment in ASEAN

1. Digital development in ASEAN

The overall level of digital development of ASEAN countries, and that of their major economic partners, is measured by the ICT Development Indicator (IDI), here presented in Table 2. Singapore is the only ASEAN country on the 2017 global list of the Top 20 countries for ICT development. Six ASEAN countries, meanwhile, have digital development levels that are lower than the global average. The large disparity in ICT development levels within the ASEAN region, as well as the region's relatively low level of digital development when compared to the region's economic partners, such as Korea, Japan, the US, and China, has prompted ASEAN to invest heavily into this field, with the goal of becoming one of the world's leading digital economies.

Table 2. ICT Development Index (IDI) in 2017

	Country	IDI Rank	IDI Value
ASEAN Countries	Singapore	18	8.05
	Brunei	53	6.75
	Malaysia	63	6.38
	Thailand	78	5.67
	Philippines	101	4.67
	Vietnam	108	4.43
	Indonesia	111	4.33
	Cambodia	128	3.28
	Myanmar	135	3.00
	Lao PDR	139	2.91
Economic Partners	Korea	2	8.85
	Japan	10	8.43
	United States	16	8.18
	China	80	5.60
	India	134	3.03

Note: The latest published IDI is for 2017. The average global IDI value is 5.11.
The ICT Development Index (IDI) comprises three dimensions: ICT access, ICT use, and ICT skills.
Source: International Telecommunication Union (ITU)

Table 3 contains recent data on ASEAN digital development in terms of infrastructure and access, internet usage, and enablers and barriers. ASEAN countries are at various stages of digital development, with Singapore, Brunei, and Malaysia leading the way; Thailand, Vietnam, Indonesia, and the Philippines in the middle; and the rest lagging behind.

In recent years, ASEAN's governments have made significant investments into digital infrastructure. Myanmar and Vietnam, for instance, have made significant advancements in 4G coverage. The government of Myanmar ended the state operator's monopoly in 2013 by granting MNC's Telenor and Ooredoo long licence tenures with low upfront costs, allowing consumers in Myanmar to benefit from expanded 4G coverage and lower SIM card costs. In recent decades, the Vietnamese government has taken the lead in expanding digital connectivity by investing in the national backbone network (the North-South optical fibre cable system), and in international infrastructure through the state-owned operator (VNPT) and public-private partnerships. As a result, Vietnam's 4G coverage increased to 95% in 2018 (Bain & Company, 2018).

Overall, network coverage in ASEAN appears satisfactory, with eight countries having at least 80% of their population covered by a 4G mobile network. However, taking the region as a whole, there are still large discrepancies between countries. In Lao PDR, only 43% of the population is covered by the network, whereas Singapore has full coverage. As such, the development of 4G networks in Lao PDR, Myanmar, Cambodia, and the Philippines remains a critical issue.

Investment in infrastructure alone is insufficient to stimulate adoption. The affordability of devices and broadband subscriptions are the key barriers. The share of individual ownership of mobile phones and active mobile broadband subscriptions varies across ASEAN countries, with Singapore, Malaysia, and Brunei having higher shares of both. Internet penetration in ASEAN varies greatly, ranging from 95% in Brunei to 24% in Myanmar. The price of ICT, as measured by the proportion of mobile broadband to income, is a significant determinant of internet usage. Countries with higher subscription prices have a lower share of internet penetration. The lack of digital literacy and skills is a major impediment to ASEAN's digital development.

Table 3: State of digital development in ASEAN countries

Country	Infrastructure & access			Internet usage	Enablers & barriers	
	Network coverage: percentage of population covered by at least 4G mobile network (2019)	Mobile phone ownership: individual owning a mobile phone (percentage of population) (2019)	Mobile and fixed broadband subscriptions: active mobile-broadband subscriptions per 100 inhabitants (2019)	Percentage of population using the internet (2019)	ICT prices: mobile broadband basket as a percentage of GNI per capita (2020)	ICT skills (basic skills, standard skills, advanced skills) (percentage of population with a skill level) (2019)
Brunei	95	94	148	95	0.3	60, 36, 28
Cambodia	80	33[a]	96	41	1.6	29, 3, 1
Indonesia	98	64	81	48	1.3	60, 20, 4[b]
Lao PDR	43[a]	n.a.	49	26[b]	2.4	n.a.
Malaysia	87	96	127	84	0.9	59, 51, 8
Myanmar	75[a]	62[b]	93[a]	24[b]	1.0	n.a.
Philippines	80[b]	79	68[b]	43	1.4	6, n.a., 1
Singapore	100	88	156	89	0.4	54, 36, 7
Thailand	98	88[b]	87	67	1.2	21, 9, 1
Vietnam	97	n.a.	72	69	1.0	n.a.

[a] and [b] represent data from 2018 and 2017, respectively, as 2019 data were unavailable.

Source: International Telecommunication Union (ITU)

2. Digital FDI into ASEAN

ASEAN's governments have recognised the importance of the digital economy as a driver of future growth. ASEAN countries have recently begun to build more efficient communication networks, as well as digital infrastructure to serve as the backbone for the region's transition to a digital economy. The majority of ASEAN countries have signed contracts to develop their networks or are already conducting network trials.

Many global telecommunications companies are involved in the ASEAN 5G roll-out by collaborating with local telecommunication companies in the network's construction. MNCs from Europe, ASEAN, and China are actively involved in the development of ASEAN's 5G infrastructure. Table 4 contains a list of MNCs investing in ASEAN countries' 5G networks. Ericsson

(Sweden), Nokia (Finland), and Telenor (Norway) are major European telecommunications MNCs involved in ASEAN's 5G market; Huawei (China), ZTE (China), and Samsung (Korea) are major players from Asia. Companies involved in ASEAN's 5G network are divided into four categories: equipment and component suppliers, mobile phone companies, technology solutions providers, and telecommunication infrastructure providers (Table 5).

Table 4: MNCs involved in ASEAN 5G roll-out

	Local telecommunication providers	Telecommunication MNCs
Brunei		Huawei (China)
Cambodia	Viettel (Vietnam)	Huawei (China)
Indonesia	XL Axiata Smartfren Telkom Indosat Ooredoo (Qatar)	Huawei (China) and Ericsson (Sweden) ZTE (China) ZTE (China) Nokia (Finland)
Lao PDR	Lao Telecom and Unitel (Vietnam)	
Malaysia	Axiata Group Maxis U Mobile	Huawei (China) and Ericsson (Sweden) Huawei (China) Nokia (Finland)
Myanmar	Ooredoo (Qatar) Viettel (Vietnam)	ZTE (China) Telenor (Norway) and Ericsson (Sweden)
Philippines	Globe Telecom Smart Communications	Huawei (China), Ericsson (Sweden), and Nokia (Finland) Huawei (China) and Ericsson (Sweden)
Singapore	Singtel M1 Starhub	Ericsson (Sweden) Nokia (Finland) Nokia (Finland)

Thailand	AIS	Huawei (China), Ericsson (Sweden), Nokia (Finland), Samsung (Korea), and ZTE (China)
	True Corporation	Ericsson (Sweden), Nokia (Finland), and ZTE (China)
	Total Access Communication (DTAC)	Ericsson (Sweden) and Nokia (Finland)
Vietnam	Viettel	Ericsson (Sweden) and Nokia (Sweden)

Source: Adapted from ASEAN Secretariat (2021b)

Table 5: Types of 5G players in ASEAN

Type	Activity	Examples
Equipment and component suppliers	Production of 5G network equipment, 5G chips for 5G handsets and related equipment	Huawei (China) Mediate I (Taiwan) Qualcomm (United States) Samsung (Korea)
Mobile phone companies	Involved with 5G infrastructure, and provide handsets that are 5G ready, with built-in 5G receptors and transmitters	Apple (United States) Ericsson (Sweden) Samsung (Korea) Nokia (Finland) ZTE (China)
Technology solutions providers	Involved with 5G technology solutions and communication software	AT&T (United States) Deutsche Telekom (Germany) Ericsson (Sweden) Huawei (China) Nokia (Finland)
Telecom-munication infrastruc-ture compa-nies	Traditional telecommunication companies that provide fixed and mobile infrastructure, including internet connection	Axiata (Malaysia) Ericsson (Sweden) Huawei (China) Nokia (Finland) NTT (Japan) Singtel (Singapore)

Source: ASEAN Secretariat (2021b)

ASEAN must continue to invest in 5G infrastructure, as the adoption of the technology is expected to reach more than 225 million subscribers by 2025. ASEAN is expected to invest approximately 14 billion USD per year in 5G infrastructure between 2020 and 2025 to upgrade telecommunication facilities, networks, and equipment to meet 5G requirements (A.T. Kearney, 2019).

Digital Investment Promotion Policy for ASEAN's Recovery

Given the importance of digital FDI in developing the digital economy and in driving ASEAN's growth in the post-pandemic period, the next step is to examine which policies best encourage digital investment in the region.

Investment in digital infrastructure is mainly driven by demand-side factors. Income levels, population size, economic growth, and educational levels are all elements which make up demand and thus act as determinants of digital infrastructure FDI. Governments can use policies to signal that their countries are potential markets for the expansion of digital infrastructure. Privatisation, liberalisation, and FDI openness are examples of such policies (Table 6). Other sector regulations, such as licencing requirements, spectrum rules, and public-private partnerships (PPP), also have an impact on investor decisions.

Furthermore, regulators can encourage investment in unprofitable areas by lowering deployment costs and making investment more appealing. In doing so, governments must balance between the public concerns raised by digital transformation, the interests of private investors, and the benefit for the country at large. Licencing, for example, is required to promote competition and ensure operating standards in order to protect broader digital business and consumer interests (Table 7). This is due to the government's important public service responsibility of providing affordable internet access to all citizens (UNCTAD, 2017).

Table 6: Policy determinants for investment in digital infrastructure and digital firms

Digital infrastructure	Digital firms
Basic sector reforms and openness • Privatisation • Liberalisation • Independent regulator • FDI openness	**Content rules and regulations** • Privacy and data protection • E-transactions and consumer protection laws • Content restrictions • Copyright laws • Intermediary liability rules • Applying traditional telecommunication or media regulators to online services • Data localisation laws
Sector regulations • Licencing conditions • Spectrum rules • Sector-specific taxes • Public-private partnerships (PPP) • Access to right of way • Local standards for equipment	**Other regulatory areas** • Mandatory source code disclosure • Regulations
Other support policies • Streamlining import procedures and rules for employing foreign personnel • Support for skills training • Regional coordination	**Support policies** • Innovation hubs • E-government services • Crowdfunding • Venture capital

Source: UNCTAD (2017)

Table 7: Development of digital infrastructure: balancing public policy and investor concerns

Selected determinants	Public policy concerns	Investor concerns
Basic sector reforms and openness	• State-owned incumbents • Public service responsibilities • National security	• Market access • Level playing field • Regulatory certainty
Licencing conditions	• Competition • Operating standards (public service responsibilities) • Public revenue	• Investment costs • Flexibility for business development
Sector-specific taxes	• Public revenue • Return on (public) infrastructure investment	• Total cost to customer • Demand maximisation
Local standards	• Industrial development	• Investment costs • Interoperability

Source: UNCTAD (2017)

Governments can attract foreign investors to set up local content and service businesses by establishing innovation hubs, creating e-government services to support local developers and local data centres, and supporting venture capital funding. Regulations governing privacy and data protection, e-transactions and consumer protection laws, as well as copyright laws all have an indirect impact on online service investment (UNCTAD, 2017).

Policies aimed at attracting digital FDI into ASEAN can be grouped into three categories: contextual policy, strategic investment policy, and policy tools to remove bottlenecks (ASEAN Secretariat, 2021b). Policies at the contextual level include cyberlaws, cybersecurity, data protection and privacy, and data residency, all of which are important factors with an influence over investor decisions. ASEAN is still in the early stages of developing privacy and cybersecurity laws, as well as data governance, and progress is uneven across the region's countries.

ASEAN has established some regional guidelines for developing such data privacy laws—the ASEAN Framework on Personal Data Protection (2016) and the ASEAN Framework on Digital Data Governance (2018). However, regional coherence is required to make the region attractive to investors, and this will only happen if ASEAN's countries are able to collaborate in the adoption of comparable regulations, as well as in their implementation.

The second category is the strategic investment policy to attract FDI, which assists in the development of enablers, and the enhancement of productive capacity. ASEAN countries need to determine what kind of FDI to attract in order to build digital infrastructure enablers. They must also consider which sectors of digital equipment and solutions manufacturing offer them a competitive advantage in order to become leaders in this field.

The third category includes policy tools for removing the region's bottlenecks. These specific policy measures address ASEAN's bottlenecks that impede the region's digital transition, assist member countries in strengthening their capacity, and make them more attractive to FDI (ASEAN Secretariat, 2021b). The following are ten policy options for eliminating bottlenecks, as summarised by the ASEAN Secretariat (2021b).

First, ASEAN should strengthen the regional digital ecosystem by attracting FDI. This should be focused at improving digital infrastructure, manufacturing of digital equipment and technology solutions, as well as towards knowledge and technology-oriented R&D hubs and centres of excellence. Promoting PPPs is also beneficial to digital infrastructure development.

Second, in order to prepare for inward FDI, governments should upgrade selected industrial parks or digitalise industrial parks to make them ready to attract digital FDI.

Third, the important roles played by SMEs in the digital ecosystem should be considered. As SMEs expand their use of digital technology, the demand for solutions and hardware will rise. This increased demand will attract foreign investors seeking for a market to invest in ASEAN. They also serve as a support industry for MNCs investing in ASEAN. As such, SME-friendly policies should be implemented.

Fourth, because governments have public service responsibilities, they must balance necessary regulation with innovation promotion. Policymakers should develop regulations including cybersecurity and data protection to ensure integrity of the digital system and to prevent cybercrime.

Fifth, a significant challenge across the ASEAN region is a lack of digitally skilled human resources. The governments of ASEAN can remove this bottleneck by attracting FDI in skills development centres and universities for Industry 4.0. This means, for instance, incorporating digital technology into manufacturing and related industries, or into teaching; it can also involve MNC training and capacity-building.

At the regional level, there are five policy measures which ASEAN can implement to strengthen the region's digital development. ASEAN should consider establishing a regional skills development and resource centre, as well as supporting regional cooperation in measuring Industry 4.0 progress, i.e. assessing firms' digital adoption rate and readiness to use digital technology in their production. ASEAN can play a role in consolidating regulation and promotion measures for digital investment, as well as compiling a list of related regional and national institutions for members to use. Finally, regional institutions should be further strengthened by broadening their role to include identifying and discussing investment policy issues in order to attract digital FDI.

Conclusion

The COVID-19 pandemic has severely disrupted ASEAN's economic activities. The region has seen an economic slowdown, supply chain disruptions, and a decrease in FDI. However, digital economic activity has grown. When ASEAN policymakers seek a post-pandemic recovery engine, digital investment could be a viable option.

ASEAN is one of the world's major economies; however, it lags behind its peers in terms of reaping the benefits of digital advancement and becoming a fast-growing digital economy. Thus, digital development is a must-have for ASEAN. The regional digital economy has potential to grow due to a set of strong fundamentals: a robust economy, a large and growing internet user base, a young population, increased ICT investment, and progress in regional economic integration under the ASEAN Economic Community (AEC). However, there are bottlenecks that ASEAN has to overcome.

Digital FDI, which includes investment in digital infrastructure and digital firms, has the potential to play a significant role in driving ASEAN's economic growth in the post-pandemic period. FDI inflows into the digital economy help to improve digital competitiveness by developing digital infrastructure and stimulating local content and service businesses. Governments must consider how to encourage FDI, while also providing public services. As such, they must keep a

balance between investor benefits and digital inclusion by providing universal and affordable access to all citizens. Digital technologies help in increasing productivity, making supply chains more resilient, and providing alternative trade channels.

Three groups of policy measures are proposed to ASEAN governments and policymakers in order to attract digital-focused FDI. The first group consists of policies regarding regulations on privacy, cybersecurity, and data protection at the national and regional levels. The second group of policies aims at attracting FDI in sectors such as digital infrastructure enablers, equipment, and solutions for the manufacturing sector, as well as improving regional productive capacity. The final group consists of policies implemented at both the national and regional levels to address ASEAN's bottlenecks in the digital ecosystem, digital human resources and skills, progress measurement of digital development, and digital promotion.

Sineenat SERMCHEEP is an Assistant Professor at the Faculty of Economics, Chulalongkorn University, Thailand. She received her Ph.D. in Economics from the University of Utah. She was Associate Dean of the Faculty of Economics at Chulalongkorn University and Director of Research Affairs, ASEAN Studies Center, Chulalongkorn University. Her research interests include foreign direct investment, digital economy, trade in services, economic integration, and ASEAN.

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Rebooting South Asian Trade for the Post-COVID-19 World

Srinivasan THIRUMALAI

Abstract

The COVID-19 outbreak dealt a severe blow to South Asian economies in 2020, and the recovery is not yet complete. International trade can help expedite recovery in South Asia if governments can step up to the challenge and reboot their trade policies. The export of goods has experienced a swift recovery, even surpassing pre-pandemic levels. This was helped largely by the pent-up demand and restructuring of demand from services to goods. Once the pandemic ends, the boost to demand may prove transient. International travel and tourism, however, is continuing to languish below pre-pandemic levels. South Asian countries should be pro-active, seizing new opportunities, including in the trade of medical goods. First, COVID-19 era liberalisation measures should be made permanent, and new barriers erected must be dismantled. Second, intra-regional trade in South Asia must be fully tapped. Here, potential bilateral free trade discussions could be hastened along between several partner country pairs, including Bangladesh, India, Sri Lanka, and Nepal. Third, conclusions of protracted trade integration negotiations with dynamic trade areas, such as between India and EU/UK, must be accelerated.

Rebooting South Asian Trade for the Post-COVID-19 World

South Asian economies shrank in the wake of the global COVID-19 crisis of 2020, although they got away lightly in terms of fatalities. Exports slumped initially, as demand plunged and lockdowns choked production. The hope of a strong rebound in 2021, predicted as late as March 2021, for South Asia has dimmed as the more virulent second wave swept through the region, straining an already weak health infrastructure and infecting people on a scale larger than the first. Sri Lanka and Nepal have already experienced a third wave, with every subsequent wave reaching higher peaks. In the first ten months of 2021, good progress was made with vaccination. Nearly 44% of the adult population in South Asia has been fully vaccinated. With the difficulties of ramping up vaccine production rapidly, unequal international access, limitations of the health infrastructure, and

vaccine hesitancy of the public rooted in illiteracy and culture, vaccinating the nearly two billion people of South Asia is going to be a big challenge that will test governments.

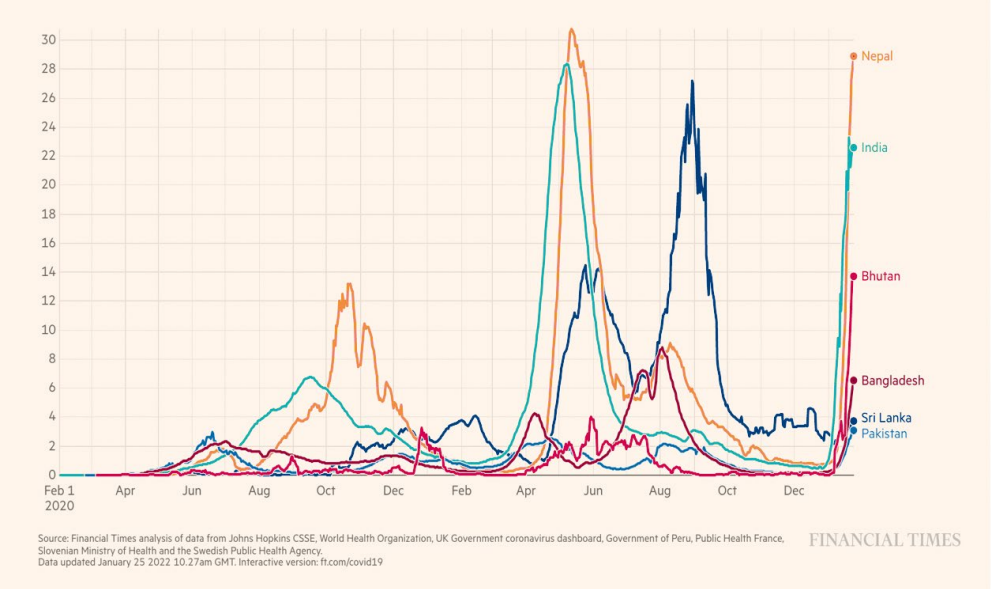
However, the brightening prospects of global recovery—led by accommodative monetary policies, fiscal support to firms and households, and rapid vaccination rollouts in the advanced economies—provides an opportunity for South Asia to increase exports of goods and commercial services. The spread of the delta variant, followed by the very transmissible omicron variant has dampened earlier hopes of speedy recovery. The International Monetary Fund (IMF) notes that global recovery will continue into 2022 (IMF, 2021). During this time, South Asian governments have stimulated their economies to the extent they thought prudent. Sri Lanka and Bangladesh became net exporters of COVID-19-related medical goods for 2020. Overall exports returned to pre-pandemic levels by the last quarter of 2020, and a further significant rise was seen in India and Bangladesh in 2021. Worker remittance inflows, which are critical for Nepal, Pakistan, and Sri Lanka, also proved to be resilient, disproving dire predictions at the onset of the crisis. However, international tourism revenues dried up, stressing the economies of Nepal, Pakistan, and Sri Lanka. Sri Lanka was pushed into an economic emergency at the end of August 2021 as its foreign reserves dwindled rapidly. In the near-term post-COVID-19 world, the travel and tourism sector will continue to languish for the second successive year as international tourists keep away because of government-imposed travel, testing, and quarantine restrictions. New migrant job opportunities will also be slow in returning to pre-pandemic levels, severely impacting countries like Nepal.

The bar of international competition has risen. Even in the pre-pandemic world, strong performers in South Asia, such as India and Bangladesh, were faltering relative to Vietnam. In India, although the foreign investment regime is improving, reversals in tariff reforms and their slogan of self-reliance are sending mixed policy signals. Post-COVID-19 world trade is taking a different shape, already jolted by the US-China trade war in 2019. The structure of world trade, be it regarding products, services, or partners, is undergoing a number of shifts, namely, the acceleration in digitalisation of commerce and services; the diversification of sourcing countries for critical products, such as semi-conductors and life-saving pharmaceuticals; a United States (US) preference for domestic products in government procurement; the reshaping of regional trade agreements; and the adoption of net-zero carbon commitment goals by several companies and countries.

The pandemic waves and vaccination progress in South Asia

The once-in-a-century pandemic started in the sub-continent in April 2020 and continues in waves with ever-higher peaks. With few options available, India quickly imposed severe lockdown restrictions in April 2020. Nevertheless, infection spread to a peak in September 2020 (Figure 1). With long and open borders with India, infection in Nepal started to climb with a lag and surpassed India's by the time of traditional festivities in October 2020. The second Indian wave in May 2021 with the more transmissible delta variant set a worrisome new peak in India, again shortly followed by Nepal. In June 2021, Sri Lanka also witnessed a surge in infections, followed by an even higher third peak in late August 2021. In comparison, other countries in South Asia had smaller waves.

Figure 1. New confirmed cases of COVID-19 in South Asia



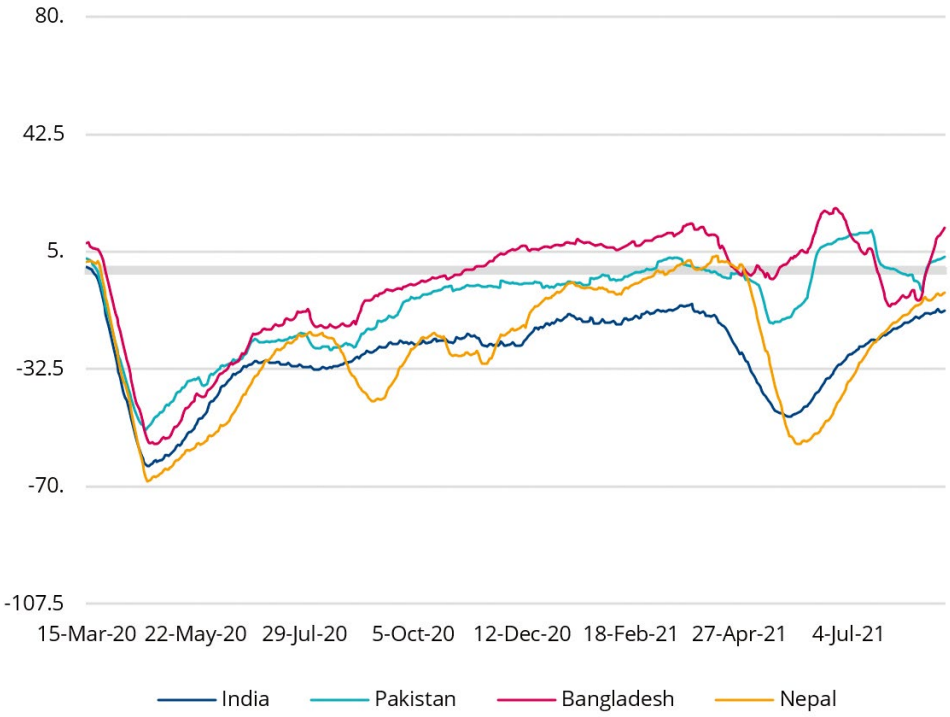
Source: Financial Times COVID-19 tracker charting tool: https://ig.ft.com/coronavirus-chart/?areas=eur&areas=usa&areas=bra&areas=gbr&areas=mys&areas=lka&areasRegional=usny&areasRegional=usla&areasRegional=usnd&areasRegional=usms&areasRegional=usfl&areasRegional=ustn&cumulative=0&logScale=0&per100K=1&startDate=2020-09-01&values=cases, accessed on 25 January 2022.

Mortality from COVID-19 has remained low in South Asia. Compared to the US, with a mortality of 201 per 100,000 population, South Asian countries considered here ranged from 12.2 in Pakistan to 48 in Sri Lanka. Bhutan, meanwhile, does not form a focus country in the analysis but had very low mortality rates, at a mere 0.4. The low mortality in South Asia is attributed by some to younger

populations and previous incidence of coronaviruses, such as severe acute respiratory syndrome (SARS).

An inevitable result of lockdown policies is the inability, for those fortunate enough to be employed, to get to work. This is a good measure of economic activity, which generally requires people to move about. Google's community mobility for workplaces measures the frequency of visits and time spent at work locations (Figure 2). Data for Bhutan and Sri Lanka were not available. Two clear troughs of mobility are noted in April 2020 and May-June 2021. Again India and Nepal, with their close links across a land border with free movement of peoples stand out. Bangladesh work mobility is the least affected among the countries compared, and as we shall see later, its GDP growth reflected this. Pakistan's workplace mobility also recovered gradually with no sharp second dip.

Figure 2. Work mobility percentage shifts compared to the pre-pandemic baseline (30-day moving averages)



Source: Google LLC 'Google COVID-19 Community Mobility Reports': https://www.google.com/covid19/mobility, accessed on 7 September 2021.

Notes: Mobility is measured by number of visitors and time spent at work locations; Sri Lanka data are not available.

Lasting recovery from the pandemic depends upon the progress of vaccination. Luckily, India is the vaccine capital of the world, with private firm contract manufacturing for the world's big pharmaceutical companies. Vaccines for the new virus were engineered in the US, United Kingdom (UK), and European Union (EU) and approved for emergency use in record time. India, China, and Russia have also independently formulated vaccines. But production bottlenecks and vaccine nationalism have resulted in unequal access to vaccines, with non-producing poor countries in South Asia having to wait their turn to buy doses, or depending upon vaccine donations.

The first vaccine administered in India was on 16 January 2021; in the eight months that followed, good progress has been achieved in full vaccination (two doses, where appropriate), as shown in Table 1. Bhutan and Sri Lanka are ahead, with Bangladesh trailing behind (Table 1). With vaccine production ramping up world over, and with more manufacturers available, prospects for 2022 look better for poorer countries. India resumed its vaccine exports in October 2021, having achieved the milestone of administering one billion doses to its population. However, several delays may occur, such as the emergence of new variants of the virus or the preemptive allocation of vaccines to deliver booster doses to those already vaccinated in the West.

Table 1. Percentage of population fully vaccinated in South Asia as of November 2021

Country	Total percentage	Total percentage of 18+
Bhutan	73.4	100.0
Sri Lanka	62.9	91.8
Nepal	26.6	44.2
India	29.4	45.4
Pakistan	22.6	40.9
Bangladesh	20.9	32.8

Source: For vaccination https://coronavirus.jhu.edu/vaccines/international, accessed on 19 November 2021.

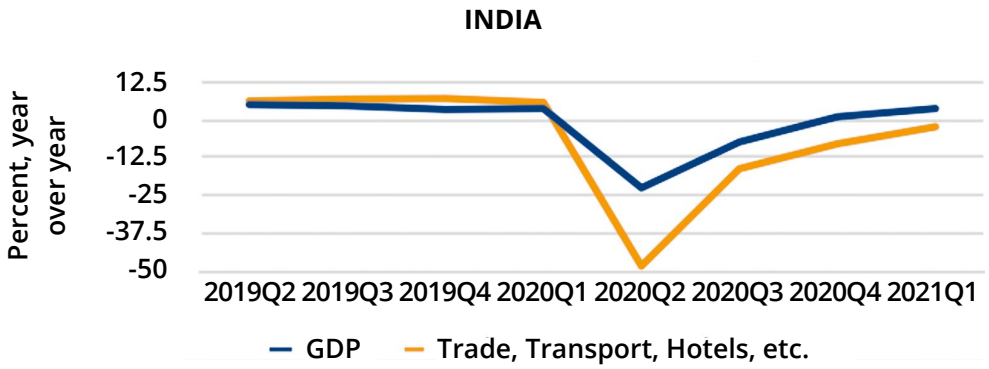
Source: For population structure https://population.un.org/wpp/Download/Standard/Population/

South Asian GDP growth collapses in 2020 and recovery is slow and uncertain

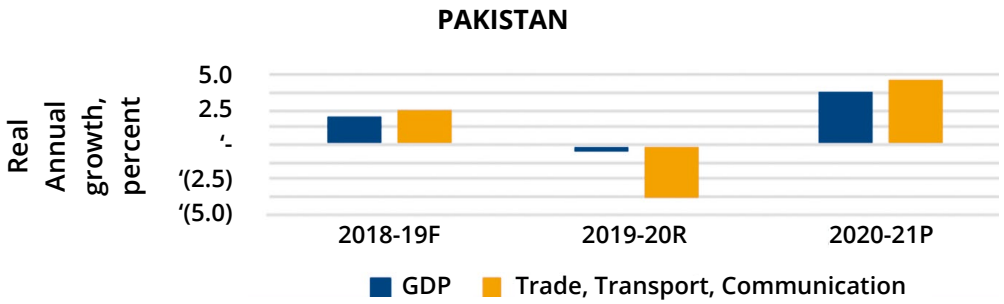
The lockdowns necessitated by the rapid spread of the pandemic during the second quarter of 2020 shrank most South Asian economies. Back then, there was extreme fear and uncertainty and neither vaccine nor cure. The quarterly GDP series available from India and Sri Lanka shows the dramatic fall in overall GDP growth during that quarter—a 22.4% drop in India and a 15.3% drop in Sri Lanka. The 'K-shape' of the fall and recovery took root in that quarter. The trade, transport, and hospitality sectors, in which many workers are informal and transactions involve person-to-person contact, have suffered even greater losses, and their recovery has been slower. India's GDP in these highly vulnerable sectors fell by 48% and has yet to recover to pre-pandemic levels. GDP in April-June 2021 was still 8% below its level two years before (National Statistical Office, 2021). Fiscal and monetary policy accommodations by all governments helped mitigate the misery, but there is limited capacity to do this. All the South Asian economies recorded negative growth rates in the pandemic year, except for Bangladesh where though growth rates halved, they remained positive at 3.9%.

India—the vaccine capital of the world—started its vaccination drive from January 2021. But the delta variant of the virus ravaged through South Asia in April-June, dashing hopes of a rapid return to normality. Fortunately, although the delta mutant was more transmissible, it proved less deadly. Sri Lanka experienced a third wave of infections in late August 2021. Rapidly dwindling foreign exchange reserves with no tourists and declining remittances forced Sri Lanka to declare an economic emergency on 31 August 2021. The effect of the new omicron variant, and any further waves of infection this may bring to South Asian countries, is unpredictable, particularly until vaccinations reach a critical mass. The adverse effects of the second and third waves manifested through 2021. GDP growth slowly recovered in the period leading up to the onset of the second wave in all the economies, but the vulnerable in-person service sectors are still trailing.

Figure 3. GDP growth collapsed in 2020 and recovery is slow and uncertain

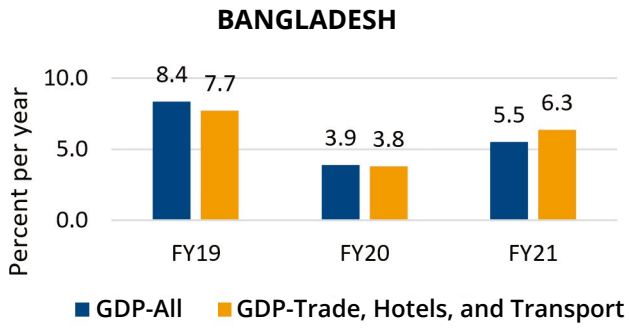


Source: Quick estimates released by Central Statistical Organisation, India, 31 May 2021.

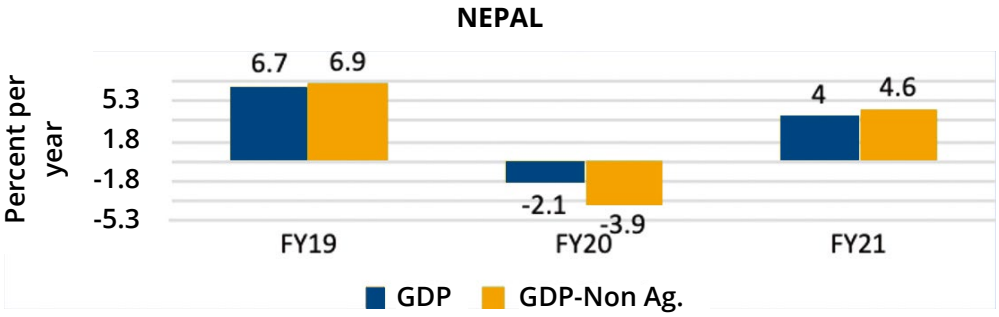


Source: State Bank of Pakistan, accessed on 12 September 2021.

Notes: For Pakistan year suffixes F, R, and P refer to the Final, Revised, and Provisional estimates.

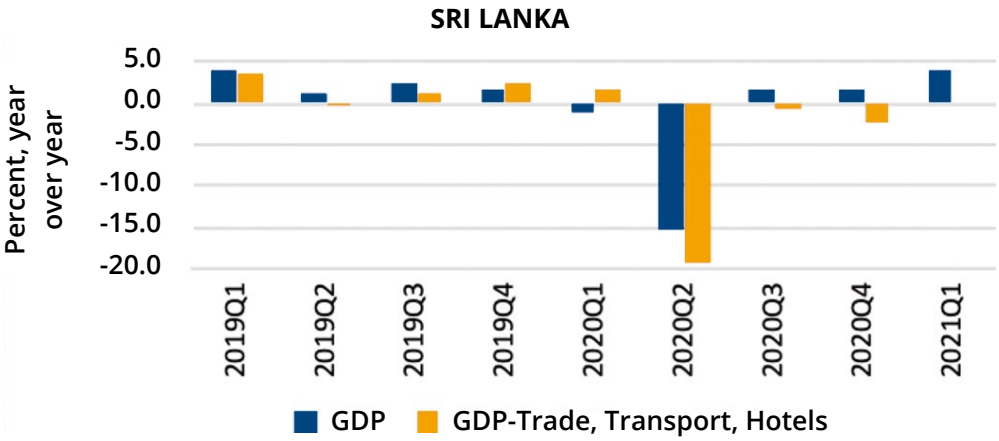


Source: Central Bank of Bangladesh: https://www.bb.org.bd/econdata/nsdp/nsdp_bb.php, accessed on 12 September 2021.



Note: Base year 2010-11

Source: Central Bureau of Statistics, March 2021



Source: Central Bank of Sri Lanka, https://www.cbsl.gov.lk/en/statistics/statistical-tables/, accessed on 12 September 2021.

Can international trade speed up South Asian recovery?

Pre-pandemic South Asia has been slow to reap the benefits of trade globalisation. Countries in the region have been hesitant and slow to bring down trade barriers (Table 2). They lagged behind China and Vietnam in lowering barriers to trade in manufactured goods. Of the eight countries considered below (six from South Asia, plus China, and Vietnam), the number of HS codes with the least MFN tariffs, i.e. the number of commodities with the least tariffs, was highest in Sri Lanka, China, and Vietnam. However, tariff rates are incomplete and can be misleading indicators of trade barriers in the presence of paratariffs. Paratariffs are duties that are levied on imports but not on domestic production. In South Asia, paratariffs (border charges and fees other than tariffs) present a significantly higher barrier for trade (Kathuria, 2018). This is particularly true in Bangladesh, Pakistan, and Sri Lanka.

Table 2. Import tariff barriers for manufactured goods in 2019

Country	Tariff rate	Count of Min
Sri Lanka	8.7	31
India	11.6	3
Pakistan	12.8	1
Nepal	13.2	1
Bangladesh	14.9	2
Bhutan	22.1	1
Comparators		
China	6.9	24
Vietnam	9.9	13

Notes:

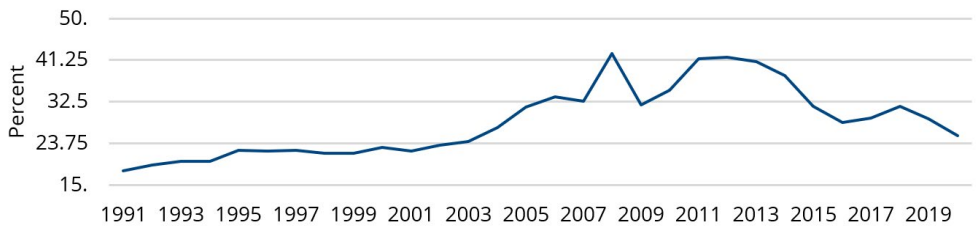
1. Tariff rate is the simple average of 'MFN' rates for 68 HS 2-digit sectors.
2. Count of minimum is the number of HS 2-digit sectors where the country had minimum tariff rates among the 8 countries listed.
3. HS codes refer to the Harmonised Commodity Description and Coding System which is an international standardised system for the classification of commodities developed by the World Customs Organization.

   MFN refers to the most-favoured nation tariffs, which are tariff rates a country applies to imports from all WTO trading partners.

Source: TRAINS database hosted by the World Bank, accessed on 8 September 2021.

Over the last decade, South Asia has become less open to international trade. The trade liberalisation reforms initiated in the 1990s opened the region to international trade. However, since 2011, trade barriers have risen, and as a consequence, the trade-to-GDP ratio has been on a declining trend (Figure 3). Moreover, only a third of the potential goods trade within South Asia has been tapped (Kathuria, 2018).

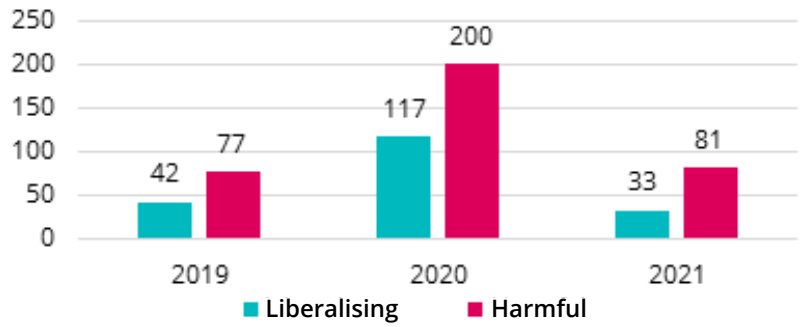
Figure 4. The declining merchandise trade-to-GDP ratio in South Asia



Source: https://data.worldbank.org/indicator/TG.VAL.TOTL.GD.ZS?contextual=default&end=2020&locations=8S&start=1991&view=chart

Protectionism has also been rising in the US (the world's largest importer) because of the actual and perceived inequalities created by globalisation and the inadequate remedies implemented to help affected workers. A peak within this trend was the Trump trade war era, which mainly targeted China but spared none. Bangladesh, meanwhile, lost its preferential tariff Generalised System of Preferences (GSP) status regarding access to the US market[1] in 2013 and India in 2019. Under the US GSP, a selected list of products entered the US duty-free. These trends were further exacerbated by the pandemic, which stoked nationalistic responses in all countries with a view to protect their citizens. All South Asian countries placed curbs on exports of COVID-19 medical goods they produced and liberalised imports of COVID-19 medical goods that were in short supply in their economies. Trade actions by South Asian countries spiked in 2020 and continued up until September 2021. From the point of view of the rest of the world, actions by individual countries can be viewed as liberalising or harmful.[2] Though ensuring enough supply of COVID-19 medical goods motivated most of the trade actions, other products were also affected. During 2020, trade restrictions increased to 200, more than doubling from pre-pandemic levels in 2019. India, Pakistan, and Sri Lanka took most of the adverse trade actions within South Asia. Liberalising trade actions, undertaken by all countries in the region, almost tripled to 117.

Figure 4. Number of trade actions by South Asian countries, March 2019 to September 2021.



Source: https://www.globaltradealert.org/, accessed on 12 September 2021

1 For more information on GSP, visit the website of the Office of the United States Trade Representative: https://ustr.gov/issue-areas/trade-development/preference-programs/generalized-system-preference-gsp.

2 Subsequent trend is showing a decline in both liberalising and harmful interventions.

The direct and critical contribution of trade to recovery from COVID-19

Despite the surge in trade restrictions in the wake of COVID-19, South Asian exports contributed to global recovery. Comparing medical goods export levels of South Asian countries', looking at pre-pandemic 2019 levels and those of 2020, Sri Lanka exported the most COVID-19-related medical goods to the world after the outbreak of the pandemic (Table 3). Most of Sri Lanka's exports were medical supplies and personal protection equipment (PPE). Bangladesh and Pakistan also exported more PPE. India exported medications related to COVID-19.

Table 3. Change in COVID-19-related medical goods ***exports*** to world, 2020 compared with 2019

	Bangla-desh	Bhutan	India	Nepal	Paki-stan	Sri Lanka	South Asian Region (SAR)
Medicines	-6.6	.0	99.1	2.8	-8.8	.3	86.8
Medical Supplies	-6.8	-.1	-58.3	.1	-98.8	105.6	-58.2
Medical Equip-ment	.5	.1	-10.0	-.1	-44.4	8.6	-45.3
PPE	89.3	.1	-45.8	-5.0	78.3	141.6	258.6
All COVID-19 Supplies	76.4	.1	-14.9	-2.1	-73.6	256.1	241.9

(USD million)

Notes: Identification of COVID-19-related medical goods is done at HS 6-digit using WTO reports.

Source: UN COMTRADE database through World Bank's WITS interface, accessed on 8 September 2021.

Just as exports of some of these goods helped the region's economies, imports of other COVID-19-related medical goods helped people in South Asia to recover. The medical goods sector saw a rapid flurry of liberalising interventions to ease the import of critical supplies in order to save lives.[3] An additional 500 million USD worth of critical supplies were imported into South Asia (Table 4). India's imports

3 A total of 36 liberalising interventions targeted the medical goods sector in 2020: India 26, Pakistan 7, Nepal 2, and Bangladesh (Globaltradealert, 2020).

of medicines and medical supplies soared by 470 million USD. Considering that the spread of the pandemic in the region was first spotted in India and then spread to others, the countries imported medical goods at different times of the year.

Overall, trade played a pivotal role in coping with the COVID-19 outbreak. India is a known vaccine manufacturing leader, yet its ability to supply to the world was limited by the urgency to protect its population first. Sri Lanka and Bangladesh, with their comparative advantage in textile manufacturing, were able to export some related medical supplies and PPE. Employment in these sectors was sustained by the demand for PPE even as the demand for apparels slowed. India was a net exporter of medicines, and Sri Lanka was a net exporter of medical supplies before and after COVID-19. Sri Lanka increased its net exports of medical supplies between 2019 and 2020.

Table 4. Change in COVID-19-related medical goods imports from world, 2020 compared with 2019

	Bangladesh	Bhutan	India	Nepal	Pakistan	Sri Lanka	SAR
Medicines	-11.0	4.0	234.7	-22.9	-16.9	28.0	215.9
Medical Supplies	45.8	4.2	245.6	18.5	59.2	20.4	393.6
Medical Equipment	-42.2	-6.8	-207.0	9.1	14.6	-36.6	-269.0
PPE	38.0	1.8	15.2	26.2	55.9	23.0	160.0
All COVID-19 Supplies	30.6	3.2	288.4	30.9	112.7	34.8	500.5

(USD million)

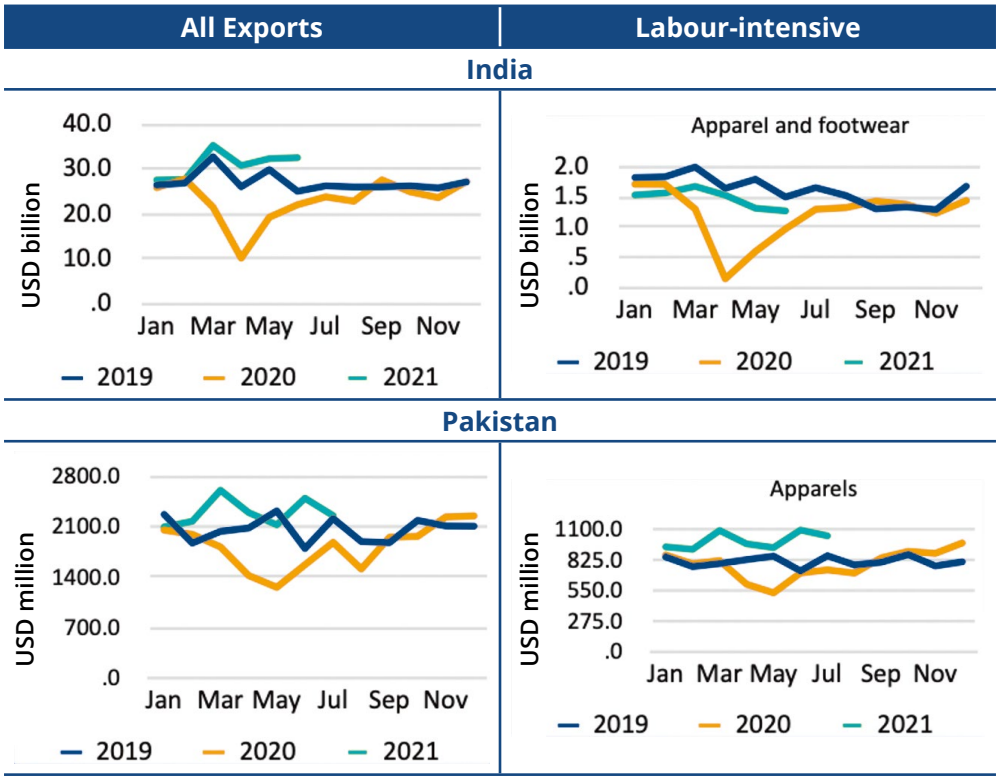
Notes: Identification of COVID-19-related medical goods is done at HS 6-digit using WTO reports.

Source: UN COMTRADE database through World Bank's WITS interface, accessed on 8 September 2021.

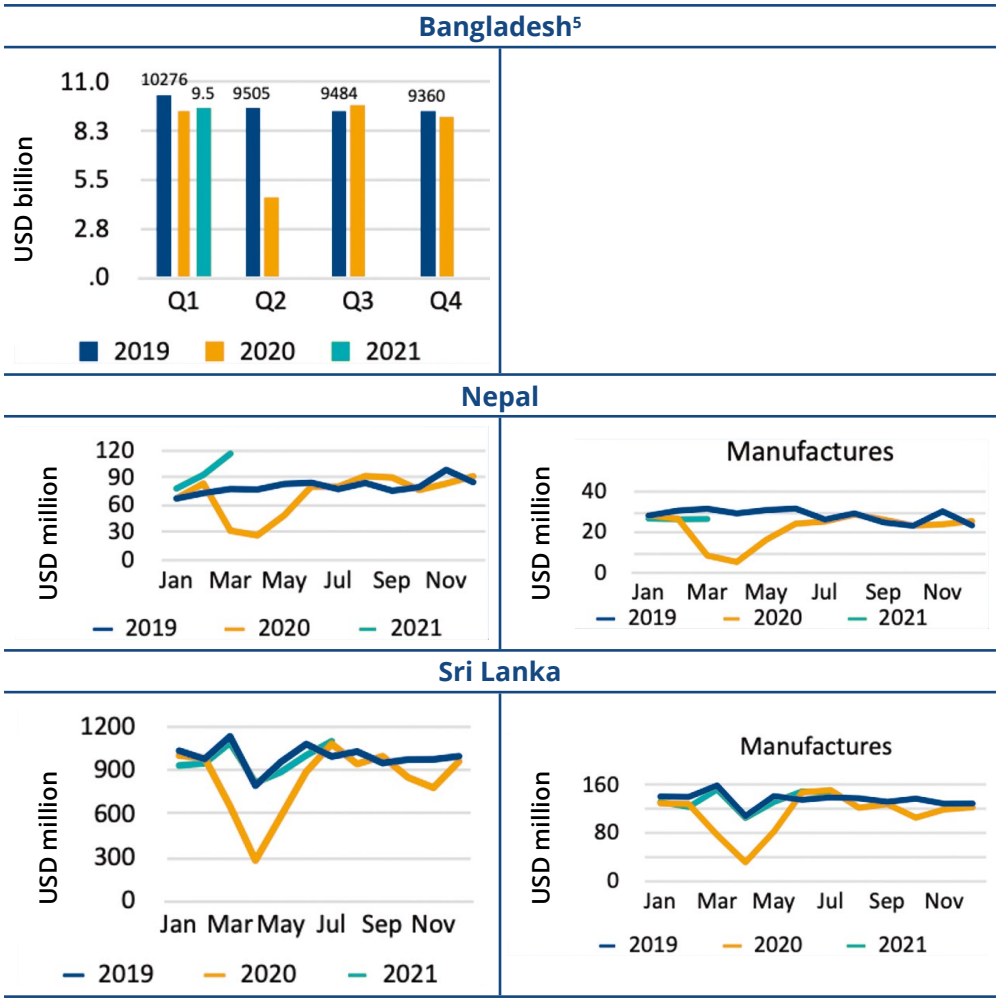
Exports have recovered to pre-pandemic levels

Overall exports recovered to pre-pandemic levels by the third quarter of 2020 everywhere in South Asia. In the first half of 2021, exports surpassed their pre-pandemic levels. This post-pandemic recovery is faster in exports than in real GDP, which shows the importance of export-oriented sectors (both formal and informal) in aiding recovery.[4] This pattern of recovery is also seen for labour-intensive manufactures, where work is often informal. However, India's apparel and footwear exports (which may be taken as a proxy for labour-intensive manufactures in general), appear to be on a down-trend, to below pre-pandemic levels. This pattern of recovery in overall South Asian exports echoes the strength of recovery of world trade as a whole (WTO, 2021). Accommodative fiscal and monetary policies in several countries, the fast vaccination of adults in the Western world, and the rebound in China have all helped world trade to recover.

Figure 5. Exports have recovered to pre-pandemic levels



4 For instance, India's nominal GDP in 2021Q2 was only 1% higher than in 2019Q2. But India's exports in the same quarter was up 18%.



Source: Central Bank statistical bulletins, accessed on 12 September 2021.

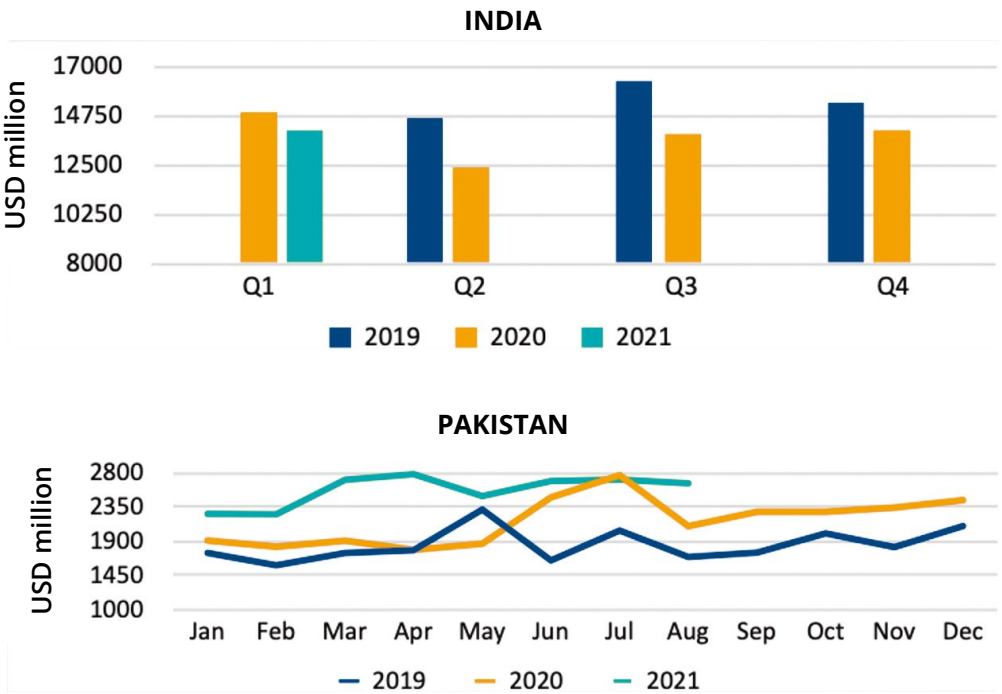
Resilient remittance inflows

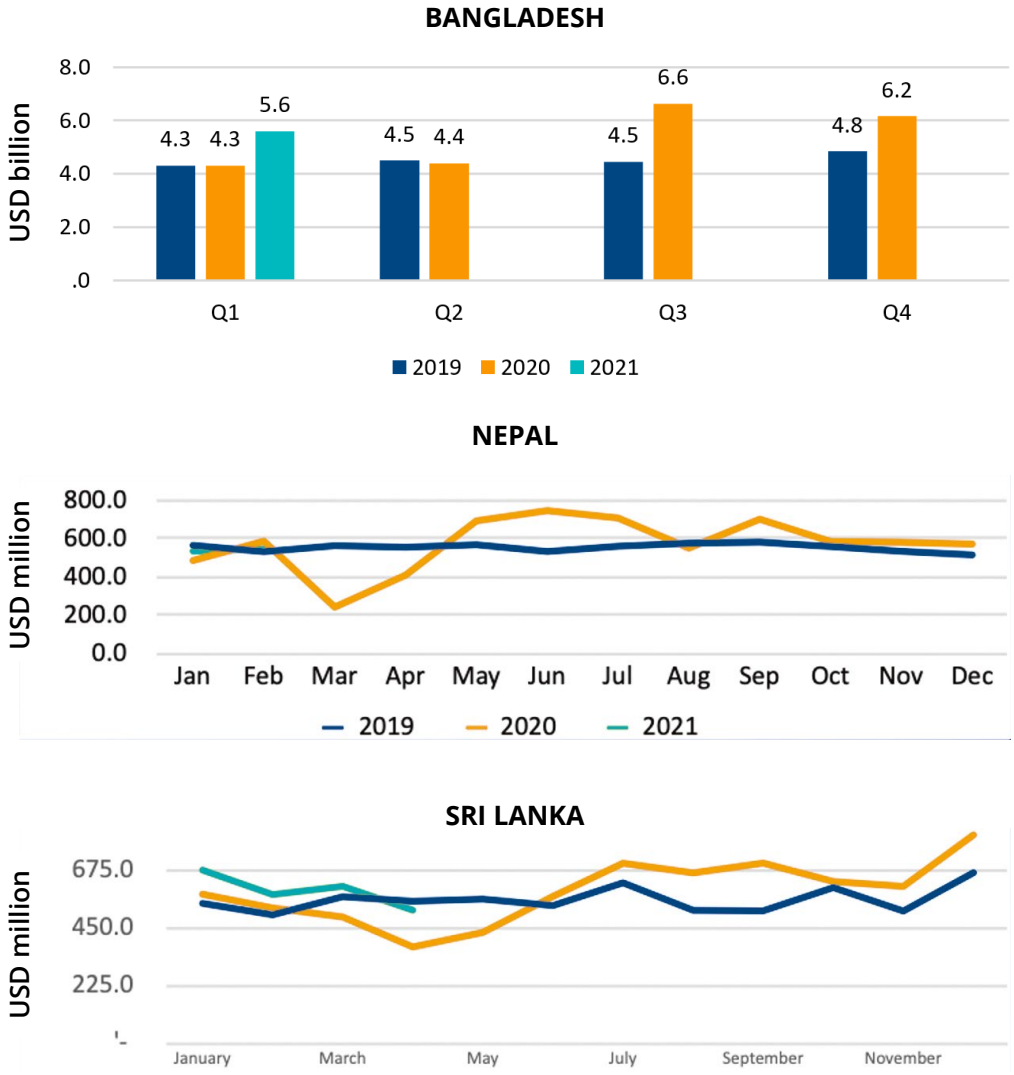
Worker remittance inflows are very important for several South Asian countries. For half a century since the oil crisis of the early 1970s, both skilled and unskilled workers from South Asia have migrated abroad to work. Remittance inflows have exceeded the sum of official aid, of net financial flows, as well as of net FDI—and have proved much less fickle. Nepal has the highest inflows—at 25% of GDP. Pakistan and Sri Lanka follow, at close to 10% of GDP. Bangladesh and India have proportionately lower sums, at 6 and 3%, respectively (WTO, 2020).

5 For Bangladesh, since most of its exports are labour-intensive apparels, no separate chart is shown.

Belying forecast decline at the onset of the COVID-19 crisis, remittance inflows have proved to be resilient. In all South Asian countries considered, excepting India, inflows during the first quarter of 2021 exceeded those of 2019 and 2020. There could be several motivations for migrants to continue sending money home. One possibility is the desire to support family members going through a job and financial crisis at home, while they themselves were left stranded at work locations because of the sudden cessation of air travel. It is also worth noting that several host governments, such as the United Arab Emirates (UAE) and Qatar, were benevolent towards migrant workers, while still fiscally stimulating their own economies.

Figure 6. Worker remittance inflows



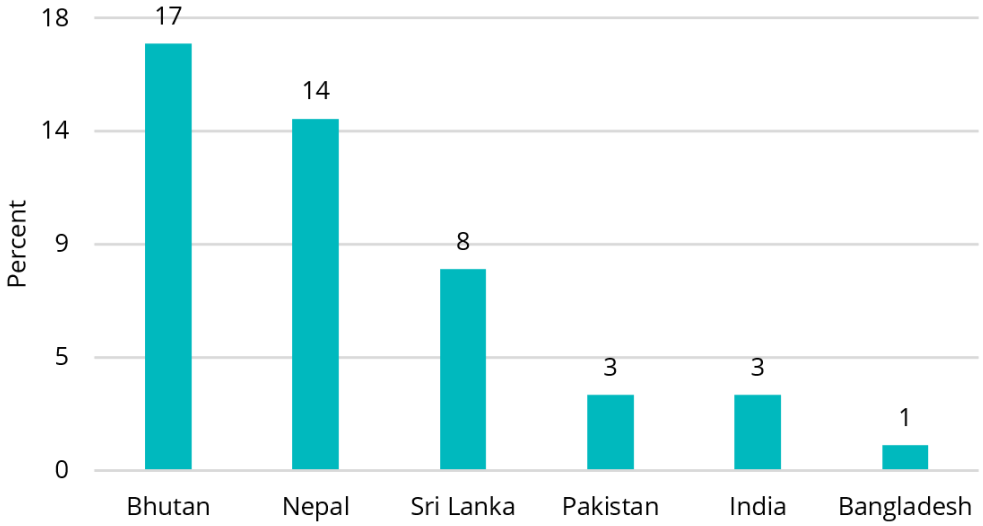


Source: Central Bank statistical bulletins, accessed on 12 September 2021.

International tourism has stalled in South Asia

Since the outbreak of the virus, international travel has been severely restricted. The World Tourism Organization notes that there was a decline of 74% in inbound tourism worldwide, in 2020. For 2021, the period from January to May also showed a decline of 65%, compared to the same period over the previous year. The decline in travel to developing country destinations is even stronger due to lagging vaccination and fewer available flights. In South Asia, dependence on tourism is higher in Maldives and the mountainous Bhutan and Nepal.

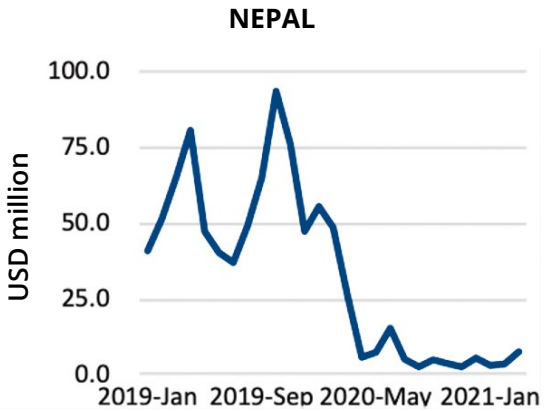
Figure 7. Share of international tourism to exports, 2019

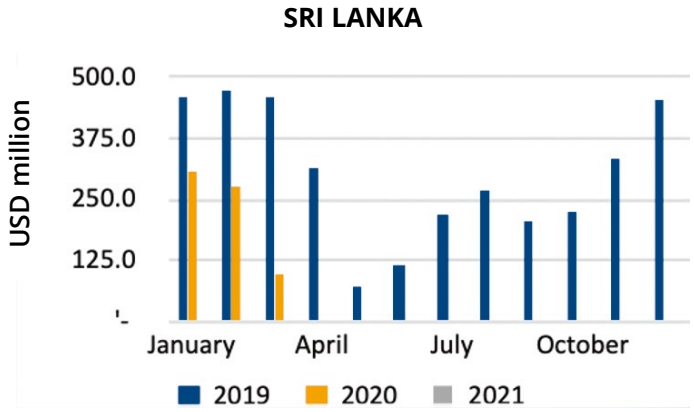


Source: World Tourism Barometer, May 2021, World Tourism Organization.

Focusing on Nepal and Sri Lanka, tourism revenues have pretty much dried up since the COVID-19 outbreak, causing the collapse of dependent industries of travel, hotels, restaurants, shops, and entertainment. The revival of international travel for tourism is now deferred for the second successive year, and it is not clear when it will resume.

Figure 8. International tourism revenues dry up





Source: Nepal Rashtra Bank, https://www.nrb.org.np/category/economicbulletin/?department=red, accessed on 13 September 2021; Central Bank of Sri Lanka, https://www.cbsl.gov.lk/en/statistics/statistical-tables/, accessed on 12 September 2021.

Conclusion

In conclusion, international trade can help in post-pandemic recovery in South Asia if governments are able to step up to the challenge and reboot trade policies. Exports have staged a faster recovery and surpassed pre-pandemic levels, helped largely by world trade momentum feeding pent-up demand. There has been a restructuring of demand from services to goods, as in-person contact services have suffered. However, once the pandemic ends, the boost to demand may prove transient. South Asian countries should be pro-active, seizing new opportunities, and taking measures to ensure their permanence, instead of reacting hesitantly. First, COVID-19 era liberalisation measures should be made permanent, and new barriers erected must be dismantled. Second, intra-regional trade in South Asia must be tapped fully—here, potential bilateral free trade discussions could be hastened between a number of partner country pairs, including Bangladesh, India, Sri Lanka, and Nepal. Third, conclusions of protracted free trade agreement negotiations with dynamic trade areas, such as between India and the EU/UK, must be accelerated.

Srinivasan G. THIRUMALAI is an economist specialising in trade, poverty, and macroeconomics. He is currently a senior visiting fellow at the Centre for Policy Research, New Delhi, India. Prior to this, he worked at the World Bank in Washington, DC, as a senior economist, as well as in the role of country economist for Jordan, Yemen, Afghanistan, and Bhutan. He has also been a consultant economist for Oman's Ministry of Finance. Thirumalai's most recent trade work has focused on the poverty impacts of cross-border trade and the strengths of cross-border manufacturing supply chains in South Asia. He has worked on a number of trade and investment policy issues affecting East Asia, the Middle East, and North Africa, including China's accession to the WTO and the MFA abolition. In poverty analysis, he has led poverty assessments for Jordan, Yemen, Bhutan, and Nepal. Additionally, he has worked on a number of development issues for a great variety of countries in the Middle East and North Africa such as Jordan, Yemen, Oman, Lebanon, Egypt, and Libya. In South Asia, his contributions have focused on India, Pakistan, Afghanistan, Sri Lanka, Nepal, and Bhutan.

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Sri Lanka's Apparel Industry: COVID-19 Impacts, Resilience, and Recovery

Anushka WIJESINHA

Abstract

The article discusses the 'triple shock' impact of COVID-19 on Sri Lanka's apparel sector, as well as the industry's efforts towards achieving resilience, including pivoting manufacturing to personal protective equipment (PPE) and partnering with government authorities to ease supply constraints. Further explored are the emerging trends and implications for the sector's resilience and growth, anchored on supply-chain restructuring, agile production, sustainability, and innovation.

The onset of the coronavirus pandemic around the world in late 2019 and early 2020 impacted the production, distribution, and consumption of many products, including manufactured products like apparel. As the International Labour Organization (ILO) noted, unlike earlier crises, the current one has been wide-ranging: all kinds of activities across the value chain have collapsed; up- and down-streams have been damaged; apparel and raw materials suppliers have suffered; and naturally this has also adversely affected brands, retailers, buyers, employees, workers, and consumers (ILO, 2020).

In Sri Lanka, exports were particularly impacted with the onset of the pandemic and the local lockdowns resulting from it in February and March 2020. According to a survey on trade and labour market impacts of COVID-19 on the export industry by the Ceylon Chamber of Commerce (2020), three key challenges that export firms faced at the height of the crisis were (1) difficulties in the continuation of overall business operations, (2) lack of operational cash flow, and (3) decline in production or productivity due to working from home or termination of workers (CCC, 2020).

The fallout of the pandemic in major markets like the US, EU, and UK spilled over to Sri Lanka, weakening consumption demand, especially for textile and wearing apparel-related manufacturing activities. The disruptions in global supply chains, and the shortages of raw materials (along with poor local availability of

substitutes), coupled with labour shortages due to lockdowns and quarantine regulations, adversely affected export manufacturing in 2020.

Among export sectors in the country, apparel exports is one of the most significant contributors to the economy. The industry has recorded substantial growth levels over the past four decades and is currently the country's leading export sector, accounting for 40 to 45% on average of total exports each year. Additionally, the sector employs over 300,000 people, accounting for approximately one-third of the manufacturing jobs in the country. The industry is entirely privately owned and has been successful in capturing a substantial share of the international market.

According to the Central Bank Annual Report 2020, the manufacture of wearing apparel recorded a contraction of 30.8% in 2020, compared to a growth of 1.9% recorded in 2019 (CBSL, 2020). There has been a recovery in demand since then due to a rise in orders for personal protective equipment (PPE) and also due to the recovery of consumption in key markets further to the steady rollout of vaccines.

This paper will first review the background and evolution of the apparel industry in Sri Lanka, highlighting recent trade performance, and will thereafter discuss the COVID-19 impacts on the sector. Various measures adopted to help boost the sector's resilience and recovery will be considered, as will key emerging trends shaping the sector's future.

Sri Lanka's Apparel Industry: Background and Evolution

The apparel industry is, today, Sri Lanka's leading manufacturing export sector. It was one of the first sectors to benefit from the economic liberalisation of 1977. Following the trade opening and the first wave of reforms that year, Sri Lanka attracted many East Asian garment exporters; encouraged by the country's liberal-trade regime, they relocated their already well-established garment businesses to Sri Lanka. Initially, the investors were quota-hopping firms locating in the country so as to take advantage of the Multifibre Agreement that offered preferential access to key markets in the West. Subsequently, local entrepreneurs partnered with these firms and also set up their own enterprises to exploit markets guaranteed by quotas, spurred on by incentives granted by the Sri Lankan government. The 200-garment factory programme of the government at the time encouraged the establishment of factories in many parts of the country, providing jobs to over 300,000 workers directly and to many more indirectly. In this way, for over three decades now, Sri Lankan apparel manufacturers have become world class, supplying global brands such as Nike, M&S, Hugo Boss, GAP,

Next, Abercrombie & Fitch, L brands, PVH, Intimissimi, Decathlon, Uniqlo, George, Lidl, and so forth. The industry is known for upholding high ethical practices, eschewing child and forced labour, implementing environmental sustainability initiatives, and thus being known to the world as a producer of 'garments without guilt' (EDB, 2015).

There are now over 300 manufacturers in the industry, with varying sizes and levels of sophistication. Several have moved significantly up the value chain and now engage in research and development (R&D), design, and innovation in collaboration with leading brands. In 2009, Nike partnered with Sri Lanka's MAS Active, the sports and active-wear division of industry leader MAS Holdings, to set up its global Apparel Innovation and Training Centre in Thulhiriya, Sri Lanka, and went on to develop the *flyknit* technology for their sports shoes. Leading Sri Lankan firms like Brandix, MAS, Hirdaramani, and Hela have invested in dozens of plants overseas as well. Some have engaged in forward integration by launching retail brands in large consumer markets, like India. Firms also now engage in high-tech clothing innovation—in the wearable-technology space, for instance—establishing outfits in global hubs like San Francisco. For example, Flex, a large electronics manufacturer for global brands across industries from health care to automotive, partnered with MAS to develop new technologies and products in the nexus between wearable technology and apparel (Flex, 2016).

Apparel Sector's Recent Trade Performance

Table 1. Industry data on exports of apparel 2018–2021 (first quarter)

Year	2018	2019	2020	2021(f)	2021—Q1
Value (in Billion USD)	5.0	5.3	4.1	5.1*	1.2

Note: f = forecast

* Forecast before the onset of the third wave of COVID-19 and associated lockdowns since May 2021

Source: Joint Apparel Association Forum Sri Lanka

Over the last decade, Sri Lanka's apparel exports had been steadily rising, from 3,985 million USD in 2011 to a peak of 5,206 million USD in 2019. As noted earlier, apparel exporters are the standout contributor to the country's merchandise exports, accounting for a share of around 45% on average over the past decade. The key markets for Sri Lankan apparels are the United States (US), the United Kingdom (UK), and the European Union (EU), amounting to close to 60% of all

apparel exports (with the US as by far the largest, followed by the UK). Exports to the EU had been on a steady upswing, following the regaining of the preferential tariff system known as Generalised Scheme of Preferences Plus (GSP+) in mid-2017. Commodities under HS Chapter 61 and 62, in particular, saw strong growth over the years.[1] The GSP+ concession resulted in significant tariff reductions for apparel export products to the EU, with the rate coming down from a range of 5.2%, to 9.6%, to zero. This growth continued robustly until COVID-19 caused demand to collapse in 2020.

COVID-19 Impacts

Following the onset of the pandemic in the latter part of 2020's first quarter, exports during the year reached 1,150 million USD between March and December 2020, a 26% drop compared to the same period in 2019. This was somewhat less adverse than early estimates of the drop in orders, and was attributed to the recovery in the second half of 2020 due to increasing orders for PPE. For the full year, apparel export earnings declined by 23% in 2020, as compared to 2019. According to the Central Bank of Sri Lanka (CBSL), the wearing-apparel manufacturing sub-sector (within the industry sector) contracted by 30.8% in 2020, compared to a growth of 1.9% in 2019. More recent data show that export earnings from January to April 2021 had recovered to 1,598 million USD, nearly matching 2018 levels, albeit still below those of 2019.

The COVID-19 pandemic hit the industry in a number of ways over the course of 2020. The sector experienced a triple shock. First, a *supply shock* due to the rapid spread of the coronavirus in China, and the ensuing shutdown of their manufacturing and logistics facilities, which affected Sri Lanka's supply of raw materials like fabrics, trimmings, and accessories. This was significant, as Sri Lanka's apparel industry imports over 30% of its fabric from China, and by February, local apparel manufacturers feared going out of work temporarily and losing orders due to supply-chain disruptions.

The second shock was the *domestic-production shock,* due to the countrywide curfew that was imposed from mid-March. Factories were closed, transport was restricted, and workers were not permitted to get to work. Subsequently, in the latter part of the curfew period, some relaxation of restrictions for export

1 *HS 61* and *HS 62* refer to the chapters relating to apparels under the global Harmonised System (HS) of commodity classification. HS 61 is for 'articles of apparel and clothing accessories in knitted or crocheted' and HS 62 is for 'articles of apparel and clothing accessories not knitted or crocheted'.

industries like apparel occurred; this was due to the recognition of the impact on export orders and foreign earnings. Nonetheless, the industry still operated below capacity due to government-imposed health restrictions.

Third, was the *external demand shock* due to the rapid spread of the virus, high death rate, and lockdowns across the US, UK, and EU—Sri Lanka's primary markets. In the US alone (Sri Lanka's single largest export market), the sales in clothing stores declined by 79% in April 2020, compared to March 2020. Due to excess inventory at the retailers' end, both buyers and brands had to cancel their ongoing and future orders while applying the contract clause of *force majeure*.

The export results of March, April, and May 2020 demonstrate that the impacts of this triple shock were felt almost immediately. Total apparel exports in those months collapsed year-over-year by 41, 82, and 49%, respectively, to 299 million USD, 60 million USD, and 205 million USD. In April 2020, exports to both the EU and US collapsed to 26 million USD, each, equivalent to approximately 18.5% of the usual figure for the month for the EU, and 17% for the US.

With lower consumer spending in the affected markets, buyers were cancelling orders, refusing to accept shipments, and unilaterally extending the payment terms. This naturally affected the cash flow of firms (Just Style, 2020), as well as their ability to pay suppliers and wages, especially in the case of small and medium enterprises (SMEs). Local manufacturers supplying buyers faced severe delays in receiving payments. A recent report (Moazzem et al., 2021) noted that payment terms, which were usually extended from 30 to 45 days pre-pandemic, had to be stretched to around 150 days, severely affecting liquidity across the apparel value chain, especially that of small- and medium-sized manufacturers, which typically have thin cash reserves.

Industry interviews suggest that in that early period of curfew in 2020, Sri Lanka lost new orders to competitor countries like Vietnam and Cambodia, which continued to operate. However, Sri Lanka also won other orders that were being diverted from countries like Bangladesh, where the health situation at the time was even more severe.

During the latter half of 2020, there were some signs of a recovery; during July-September, the monthly gap between the profits of 2020, as compared to those of 2019, was narrowing to between 2-12%. However, with the outbreak of a sharp second wave in October, which hit apparel factories and workers particularly hard, exports once again saw year-over-year declines of 20 and 35%, in October and November, respectively.

By early 2021, the sector saw stronger recovery and rebound. For data available up to April 2021 from the Apparel Exporters Association, exports to the EU under

HS Chapter 61 had exceeded that of all previous similar periods. HS Chapter 62 recovered only modestly during January to April compared to the same period in 2020 and was still around 30% below the average in pre-COVID years. Exports to the US, on the other hand, did not show a similar recovery trajectory. By April 2021, exports of HS Chapter 61 had recovered to around similar levels as the same period in 2017, of 373.25 million USD, while HS Chapter 62 showed little recovery compared to the same period in 2020.

According to the director of a leading manufacturer,

> Although we envisage a reduction in the existing order pattern with end market store closures in the US and EU during the next six months to a year where most of our strategic customers are based, it is a possibility that there will be potential from the PPE wear and new customers based on the existing capabilities of the company. (Teejay Lanka PLC, 2020)

An industry stakeholder noted that demand from existing strategic customers—via supermarket chains and online outlets—have seen significant growth in sales even in a COVID-19 environment in both the US and EU. They acknowledge, however, that margins will remain significantly challenged. Indeed, industry interviews conducted between May to June 2021 suggest that Sri Lankan manufacturers are facing tight margins amidst intense price competition from manufacturers in other countries, which are now fighting to regain the market share they lost during much of 2020 and early 2021 when the pandemic was ravaging their economies.

Impacts on livelihoods and employment

When considering the impacts of COVID-19 on the apparel sector, one cannot ignore those felt by the workers. Moazzem et al. (2021) drew from a survey of 40 workers to show that among the 70% of whom were machine operators, disruptive shocks to the supply chain had substantially impacted their incomes. During the first lockdown in Sri Lanka (March to June 2020), 67% of the workers surveyed said they had been temporarily retrenched, leading to severe income impacts. Among the interviewed workers, 64% reported an increase in their debt obligations in September 2020, compared to December 2019. There were 79% of female workers and 66% of male workers who had been forced to sell their assets or spend their savings to survive during this period. Among the measures they took was pawning jewellery. This was considered especially troubling because only 15% of those surveyed belonged to a social-protection programme. Most of the workers had no effective safety net. It was revealed that some preliminary discussions had taken place between the Ministry of Skills Development,

Employment, and Labour Relations and the ILO aimed at establishing a social and employment protection programme. However, this policy had not been implemented.

Support for the Sector's Resilience and Recovery: Fiscal and Monetary

Unlike in many other countries in the Asian region, Sri Lankan authorities did not provide any specific fiscal stimulus to manage the economic fallout of COVID-19, either at a macroeconomic level, or specifically targeted to the apparel sector. The limited revenues (due to sweeping tax cuts introduced in December 2019 following the election of a new President), and an already ballooned budget deficit, meant that the government did not have the fiscal space to provide any firm- or worker-oriented relief.

However, there was a concerted effort to provide financial relief and support to enable the sector's resilience and recovery by way of banking sector policies. The Treasury and Central Bank introduced reduced-interest loan schemes, special refinancing windows for working capital, and debt moratoria to help industries tide over the COVID-19 impacts, and apparel firms also benefited from these concessions. According to internal reports from selected commercial banks, the nonperforming loans (NPL) ratio in the sector amounted to around 8% of total sector exposure, which was only slightly above the NPL average across their entire portfolios.

Of course, an important caveat to note here is that the financial-assistance programmes extended by the government, the Central Bank, and the commercial banks were directed at firms in general, and not to the apparel sector in particular. Although there were some instances of specific lines of credit being made available by banks to help apparel firms meet urgent production needs, specifically for PPE manufacture. For example, the Sri Lankan unit of the global bank Standard Chartered extended a 12 million USD credit line to apparel exporter Brandix (for PPE manufacturers at their Sri Lankan and Indian plants) under the bank's global 1 billion USD COVID-19 financing facility (Standard Chartered, 2020).

The apparel sector's prospects are also worth considering from the risk perspective of banks. Slow growth is forecasted, but with a 'positive outlook', judging from an interview with a major commercial bank to assess the forward-looking risk appetite for lending to this sector. The chief risk officer of the bank further observed that,

> The current demand for apparel exports is driven quite a bit by PPE and the demand for PPE may see a reduction in line with the global vaccination process. Considering the current market/demand dynamics, it would be prudent for banks to closely monitor the order books of the respective customers and to analyse the composition to ascertain whether their regular orders (from the regular buyers) are re-instated. (Personal communication, 2 June 2021)

Support for the Sector's Resilience and Recovery: Strategic and Operational

There was a strong private-public partnership effort to help the sector weather the impacts of each of the shocks. Regarding the supply shock, a joint effort was launched between the Sri Lanka Export Development Board, the Ministry of Foreign Affairs (commercial attachés in overseas missions), and the apex industry association, Joint Apparel Associations Forum (JAAF), to address sourcing constraints. The head of the foreign ministry's Economic Diplomacy Programme noted that,

> At the request of the Joint Apparel Forum of Sri Lanka (JAAF), the Ministry together with the Sri Lankan Missions have successfully coordinated sourcing raw materials for the production of PPE, thus catering to the rising demand from many countries. 53 potential suppliers for specific raw materials were identified (Economynext, 11 June 2020).

Meanwhile, to counter the domestic-production shock, the Board of Investment (which manages the export-processing zones, where most apparel industries are located), together with the Export Development Board and the Presidential Task Force on COVID-19, worked on easing the curfew conditions for the industry. As such, apparel-sector workers were permitted to return to work despite the curfew, factories were permitted to operate at reduced capacity, and public-health inspectors advised establishments on how to adjust work layouts in order to meet physical-distancing guidelines. Even during the second and third lockdowns (October to November 2020, and April to May 2021), the authorities facilitated the operations of export industries in general and of the apparel industry in particular. However, there was criticism that this came at the expense of worker welfare. Large numbers of COVID-19 patients were observed among apparel-sector workers (including a prominent apparel factory being the starting point of a massive new cluster in October 2020), and there were substantial delays in rolling out the vaccines to these workers, despite the expectation that they return to work.

Finally, as relates to the external-demand shock, the short term focus was to pivot to the manufacturing of PPE, as part of a larger programme initiated by the government to respond to the collapse in demand for exports (Ministry of Foreign Relations, 2020). Since the COVID-19 outbreak, the global supply chain for PPE has not been able to adequately cope with the surge in worldwide demand. Constraints in supply and logistics, including export bans on PPE and materials, have contributed to a global shortage of PPE. This was exacerbated by abrupt supply disruptions in China, a major producer of PPE.

As early as May 2020, Brandix, one of the country largest apparel exporters, had pivoted around 9,000 of its 30,000 workers in Sri Lanka to the manufacture of PPE (and was due to increase this share to 50% of its workforce). It was one of the first to ship 200 million face masks to the US, and ramp up factory production for PPE manufacture (Economynext, 2020b). Brandix took a factory that made fabric for lingerie and other apparel, and reoriented it to mask production.

According to a survey done by the author in May 2020, other manufacturers had also begun pivoting their manufacturing to PPE so as to sustain their operations, or were planning to produce PPE in the near future. The orders for PPE were also being subcontracted to smaller-scale producers.

However, while Sri Lanka has emerged over the years as a leading supplier of ethically manufactured high-quality apparel for global fashion brands, successfully exporting to the US and EU, the industry had no prior experience in producing and exporting PPE in compliance with stringent regulations governing medical devices in the US market. As such, a number of exporters belonging to the JAAF were interested in exploring export opportunities of PPE to the US market (the largest market for PPE at the time) but were finding it difficult to understand and navigate US Food and Drug Administration (FDA) regulations governing PPE. This includes, for instance, the *emergency use authorization* (EUA) and how to obtain FDA approval for medical devices. Similarly, the industry is neither well-versed with US federal and state government procurement processes, nor with US distribution channels of PPE.

The industry began sharing available best practices for the manufacture of PPE (obtained from online sources) through JAAF and other informal channels, but more reliable and detailed information was still required, especially with regard to medical devices. A donor-supported project at the time invited commercial experts from the US to provide detailed guidance to the industry—through online consultations and guidebooks—both on how to obtain FDA approval and on how to navigate federal and state procurement processes (USAID, 2020). Post-programme feedback showed that while a majority of participants who joined

the programme had some prior awareness of the regulatory landscape, their knowledge substantially improved afterwards, and a high number reported being 'more confident about exporting PPE to the United States' after the programme. The survey also showed that the majority were focusing on production and export of so-called *class 1 products*, as these do not require FDA premarket review and compliance registration is quicker and easier.

The latest data suggests that the surge in demand for PPE has now passed, that export restrictions imposed by the US, the UK, the EU, and China have been lifted, and that market conditions are normalising. Although the demand for PPE will not entirely abate and annual demand growth from 2022 to 2025 is forecast at 6 to 9% (IFC, 2021). To be sure, Sri Lankan apparel exporters had not seen PPE manufacturing as a longer-term focus. By mid-2021, most Sri Lankan apparel manufacturers had moved away from the earlier pivot and reverted to their usual product segments. Although some smaller manufacturers continue to produce PPE for the domestic market.

Emerging Trends and Implications for Sri Lanka

The pandemic accelerated trends that were in motion prior to the crisis, and these point to the direction in which the Sri Lankan apparel industry ought to head. As acknowledged by the Organisation for Economic Co-operation and Development (OECD), successful risk-management strategies at the firm level include an 'emphasis on risk awareness, greater transparency in the value chain, and promoting agility' (OECD, 2020, p. 2). Meanwhile, as noted by a Sri Lankan stock exchange–listed fabric maker, 'the primary driver of retail growth remains digital channels, while heightened focus on environmental sustainability and social justice has led to increased demand for greater accountability and transparency' (Hayleys Fabric PLC, 2021). These comments highlight some of these trends, which the following sub-sections will explore, along with their implications for Sri Lanka.

Supply chain shifts and opportunities for Foreign Direct Investment (FDI)

At the supply-chain level, resilience can be achieved by reshoring, diversification, regionalisation, and replication. The global apparel value chain is likely to experience many of these at different levels in both crisis and post-crisis periods (Moazzem et al., 2021). Zhan et al. (2020) notes that diversification of sources is expected to be the most widely used in actual practice, followed by reshoring, regionalisation, and replication (Zhan et al., 2020). A similar conclusion was reached as regards implications of global supply chain shifts for Sri Lanka (Deloitte, 2020).

The COVID-19 induced global shutdown, and ensuing supply disruptions, have led many companies to recognise their over-reliance on supplies from China (Bell, 2020). These companies are now actively seeking new suppliers and manufacturing locations outside China. This is not only to diversify their supply chains, and mitigate their risks, but also in view of rising production costs in China. As noted by an industry leader in a message to shareholders,

> Because of COVID-19, companies are apprehensive about relying on a single destination for its supply chain and are moving away from China and looking at the South Asian region… Supply chain strategising to maintain the total supply chain within a country and mitigating its reliance on a single destination may become a reality in the future. (Teejay Lanka PLC, 2020, 7)

Industry officials also believe that the trade tensions between the US and China could have positive ramifications for countries such as Sri Lanka and others in the South Asian region.

Clearly, there is a window of opportunity for countries like Sri Lanka to benefit from the supply chain shifts that are currently underway. Sri Lanka's focus should be on proactively promoting FDI to attract investors looking for new locations and to support existing firms to find joint venture partners. Promotional efforts should focus on the country's geographic location, the competitive and efficient port, preferential market access to the EU and US, and bilateral FTAs with several South Asian countries, as well as ethical and sustainable business practices.

The industry expects that a key focus in investment attraction is backward integration, that is, securing input supplies domestically. The government and industry have embarked on a joint effort to establish a *fabric processing plant* with foreign investment, and built on strong green credentials in the eastern town of Eravur. It is aimed at helping to secure more of the supply chain domestically, thereby raising domestic value addition from 52% to 65%, according to industry estimates (Just Style, 2021), as well as acting as a vital sourcing-risk mitigator.

Meanwhile, retaining existing, as well as enhancing, preferential market access (EU GSP+, US GSP, etc.) will be essential to making the country an attractive FDI location. On retaining current advantages, recent developments with the EU GSP+ have cast worries. In June 2021, the European Parliament passed a resolution that, among other things, called on the EU Commission to investigate and subsequently consider temporary withdrawal of GSP+ concessions granted to Sri Lanka. It cited deteriorating human rights conditions, and the government's non-adherence to certain legal reforms that the country had committed to, which

are conditionalities under the GSP+ scheme (European Parliament, 2021). The apex industry body JAAF has urged the government to ensure the continuation of GSP+ as it is 'necessary when the industry faces significant challenges in the post-pandemic world' (Daily Mirror, 2021).

Greater agility, redundancy redefined, and digitalisation

With the uncertainties surrounding the pandemic, new variants continuing to emerge, sudden lockdowns and travel restrictions, and the long-tail effects of COVID-19, economic and otherwise, the changes seen in retailers' and consumers' purchasing behaviour may well be permanent. Given the costs associated with holding stocks, brands and stores (whether physical or online) generally prefer to maintain smaller inventories. As such, they prefer to work with manufacturers that can be agile and nimble in adjusting to market demands. A survey by the Business of Fashion and McKinsey (2021) revealed that a vast majority of fashion industry executives are deploying several strategies to avoid overstock—61% plan on reducing the number of stock-keeping units (SKUs), 60% reported they would improve analytics for consumer insights, 55% said they plan to implement a more agile supply chain, and 43% intend to reduce product development lead times.

Some larger Sri Lankan manufacturers are well positioned for this, given their focus on innovation, logistics, and design in recent years, while some others (more traditional players and SMEs that rely on the more traditional seasonality and orderbook model) may find it difficult to adjust. Leading apparel exporter MAS Holdings has two unique initiatives to latch on to this trend and ensure resilience in the face of fashion industry pressures. The first is the Runway Kit, the digital arm of MAS manufacturing, set up to support small- and medium-scale apparel brands in sample-making and in manufacturing swimwear and activewear under low minimum-order quantities (MOQs) ('Runway Kit', n.d.). The second is MAS Click, a *concept-to-delivery* business model that helps brands rapidly adapt to evolving consumer demand by testing consumer preferences with low MOQs, and replenish bestsellers multiple times in season ('MAS Click', n.d.). The company uses advanced analytics across sales data and consumer sentiment to gain insight on style performance, and helps the brands derive greater profitability by minimising the risk of markdowns, slow-moving stock, and returns.

While firms focus on enhancing their internal capabilities in design, digital, and process efficiency to capitalise on these trends, as an economy, Sri Lanka should focus on accelerating reforms for better trade facilitation, i.e. border efficiency and the removal of trade-related obstacles.

Many of Sri Lanka's larger firms had invested in the digitalisation of systems and processes prior to the pandemic, which helped them remain resilient. This helped them, for instance, when work-from-home rules applied following the first lockdown, or when implementing contact-tracing and risk management in plants, or when delivering better customer solutions. Industry players have also used technology to help product-creation teams to anticipate sales trends, validate customer preferences, and research pricing options, all of which were upended by the pandemic. Digitalisation had helped incorporate a feedback loop into product design, and to reduce lead times, as well as speed to market. Technology had also played a role in virtual prototyping for firms like MAS Holdings, which had previous relied exclusively on in-person visits. As noted by their chief digital officer, 'We would usually pack our bags and visit our customers and present it on a catwalk. Now product presentations are done digitally'.

Evidently, however, there is some ongoing discussion in the apparel industry about finding the right balance between striving for agility and building in redundancy. The latter comes from the disruptions to the supply chain observed during the pandemic and from input sourcing difficulties (the first of the three shocks outlined earlier). At the time of writing, the industry is faced with a further challenge—the severe shortage of shipping capacity and associated delays, along with heightened freight costs. Apparel-industry leaders interviewed noted that traditional ways of building redundancy are no longer feasible, and that redundancy is being redefined. Redundancy is changing in type, as well as in the manner in which it is achieved; a form of *flexible redundancy* appears to be emerging. Redundancy, by way of holding inventory purely in a manufacturer's own location in-house, is being pursued much less than redundancy across the supply chain. Manufacturers are entering risk-sharing arrangements with customers so as to secure inventory buffers. Moreover, redundancy by way of holding inventory is being focused not on the finished product, which was the traditional approach, but more at the raw material stage.

Manufacturers are, thus, enabling flexible redundancy with the goal of achieving supply chain resilience. They do this through at least three different approaches: (1) outright owning more of the raw-material supply chain (upstream investments in fabric mills, for instance), (2) deep, strategic relationships with suppliers with whom dynamic adjustments to inventory can be made at little cost and time commitment, and (3), even if it is not the first or second approach, at least having the suppliers onshore rather than offshore (example is the proposed Eravur Fabric Park discussed in the previous section).

One industry leader outlined that a key focus for enabling flexible redundancy across the supply chain—in a bid to build resilience—is for Sri Lankan apparel firms to maintain a presence in countries outside Sri Lanka. Top customers in the US, UK, and EU have increasingly prevailed on their Sri Lankan partners to distribute manufacturing (i.e. location diversification) and to build redundancy through production facilities in other countries. This has added a new dimension to Sri Lankan apparel firms' strategy of investing overseas, which was hitherto largely driven by considerations of cost efficiency (cheaper labour costs or preferential tariff advantages) and logistics proximity. Already, Sri Lankan manufacturers like MAS, Brandix, Hirdaramani, and Hela have established production facilities in Bangladesh, Indonesia, Honduras, Jordan, Vietnam, Haiti, Ethiopia, Kenya, and the US.[2] This has helped keep these players competitive amidst rising manufacturing costs, a tightening labour market at home, and Sri Lanka's stalled trade integration (set to afford preferential market access for its exporters).

Focus on sustainability and innovation

A looming twin challenge facing the industry is that of escalating labour costs, and the dependence on EU GSP+ concessions, which some consider to have reduced the competitiveness of the industry, and increased the vulnerability of the sector to global market shocks. To counter this, the apparel industry has begun to climb the value chain by investing in innovation and environmental sustainability. As noted by a sector leader in a message to shareholders, 'A key future strategy is innovation and development of sustainable products such as biodegradable products, bio-based materials and chemical-free performance products' (Teejay Lanka PLC, p. 7). In a recent poll with fashion-industry executives, around half indicated that sustainability has moved up their list of priorities in the post-COVID environment.[3]

As such, Sri Lankan apparel manufacturers are now focusing on sustainability principles with regard to product innovation—and doing so in a more strategic and formalised in-house manner. In 2019, leading exporter Hirdaramani Group launched the Hirdaramani Discovery Lab as a product innovation and technology

2 The size of these overseas investments are not publicly known as the firms are all privately held.

3 Participant poll (n >300) conducted during the 'McKinsey Sustainability in Fashion: Apparel, Fashion & Luxury' executive webinar hosted by the Global Fashion Agenda (2020).

centre to develop and implement products, processes, and technical innovations with the goal of improving sustainability and productivity (HSBC & IUCN, 2021).

Another leading manufacturer, Brandix, has had a long-standing focus on sustainable manufacturing, having opened their first green-apparel factory in 2008, which was the first manufacturing facility in the world to be rated *platinum* under the Leadership in Energy and Environmental Design (LEED) Green Building rating system. More recently, their plant in Batticaloa was also recognised as the world's first net-zero-carbon–certified manufacturing facility.

The sector will also benefit from having access to innovative fabrics that are particularly relevant in a post-COVID era. A leading Sri Lankan *welt-knit* producer, who supplies many of the apparel firms in the country, has developed a collection that focuses on so-called *defensive fabrics*, such as antiviral/antimicrobial defences, as well as textiles with carbon compounds, and sustainable fabrics (Teejay Lanka PLC, 2020). Also, as noted earlier, Sri Lanka intends to establish a green industrial park for fabric production with state-of-the-art facilities for water treatment and effluent management. This is an important step, considering that textile wet processing is the most resource intense step in the entire apparel manufacturing lifecycle, using over 80% of water, over 75% of energy, and nearly 60% of chemicals (HSBC & IUCN, 2021).

Recently, the Sri Lankan office of the International Union for the Conservation of Nature, (IUCN) in partnership HSBC Sri Lanka, launched a 'Road Map to a Greener Apparel Sector in Sri Lanka: A Sustainable Financing Strategy for Sri Lanka', which recommends 12 areas for the apparel sector to focus on, including renewable energy, zero discharges, science-based targets, circularity, and sustainable financing (HSBC & IUCN, 2021).

Concluding Remarks and Outlook

Sri Lanka's apparel industry—a significant export revenue earner and employer—has been substantially hit by the pandemic. Yet certain characteristics of the sector, as well as some public-private collaborative efforts, have helped the sector weather the crisis and pick up business once more. In terms of the sector's overall resilience through the crisis thus far, Moazzem et al. (2021) have noted that,

> Better inventory management, flexibility in the sourcing of raw material supplies, flexible supply chain management, innovative approaches, and better use of digital infrastructure, helped Sri Lankan suppliers manage the crisis better. This was partly due to the medium- and high-end product

> market segment of the apparel value chain where Sri Lanka primarily resides, and the smaller scale of supply orders. (p. 24)

At the time of writing, Sri Lanka had just gone into a fourth lockdown (the second in two months) following a sharp spike in infections and deaths, attributed to the spread of the delta variant. An industry leader noted that the estimate for Sri Lanka's 2021 exports was 5.1 billion USD, but reaching that was unlikely due to lockdowns and associated production disruptions during the third and fourth quarters of 2021. The 2021 export data are yet to be released, at the time of writing. By the start of 2022, Sri Lanka's infection rates recorded low levels, and more than 80% of the population had been fully vaccinated. The likelihood of major disruptions to production during 2022 is low, even as new variants emerge. Yet, other factors will put pressure on the sector.

Government restrictions on imports continue, and restrictions on exports have also begun to bite. Regarding the latter, monetary authorities have stipulated that exporters must compulsorily convert all their export proceeds from foreign currencies to the domestic currency, and banks receiving the remittances must send 10% to the Central Bank right away. This is quite challenging, given that apparel exporters need to retain foreign currency to pay for inputs bought overseas, and coercing conversion into the domestic currency unnecessarily adds to their transaction costs. More recently, the tightening of foreign-exchange markets have meant that there is a severe shortage of dollar liquidity, as banks are compelled by the regulator to quote exchange rates at artificially held prices (between 198-202 Sri Lankan rupees (LKR) to 1 USD, when market rates were closer to 230-240 LKR by end 2021). Successive sovereign ratings downgrades over the past 6 to 12 months and forex-reserve concerns have led the overseas counterparts of Sri Lankan banks to cap or cut dollar credit lines, which, in turn, impacts banks' ability to finance exports and imports. All these macroeconomic conditions, coupled with the ongoing COVID conditions, will no doubt affect the apparel industry's near-term resilience and profitability.

Yet on a positive note, the rapid vaccine rollout in Sri Lanka's key markets—the US, UK, and EU—and the concomitant decline in the spread of COVID will help the industry turn a corner. Winter-season orders are reportedly at strong levels. Already various data in these markets relating to economic activity, purchasing inventory, retail sales, and household spending point to an overall recovery in consumer sentiment and, consequently, to a boost in demand for Sri Lankan apparel exports. Risks of new virus variants notwithstanding, the short term future of the industry looks promising, provided domestic health conditions remain under control. Whether the medium-term goal of moving from recovery

to resilience, and thereafter a new wave of growth, will indeed occur will depend on in-sector upgrades and innovation. This includes attracting new investment that drives innovation (in business models and products), establishing new supply chains, meeting sustainability targets, complying with buyer requirements, and catering to consumer preferences.

Anushka WIJESINHA is an economist focusing on trade, competitiveness, and innovation based in Colombo; he recently co-founded the Centre for a Smart Future, a new interdisciplinary think tank. He consults independently for international organisations like the United Nations Conference on Trade and Development (UNCTAD), International Trade Centre (ITC), and the United States Agency for International Development (USAID). His recent work has been in Pakistan, Myanmar, Maldives, and Sri Lanka. He was formerly an advisor to the Ministry of Development Strategies and International Trade of Sri Lanka. He was a member of the World Economic Forum's Global Future Council on Innovation Ecosystems.

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2

Asia–Europe Trade Connectivity

European Trade Relations with Asia

Axel BERGER

Abstract

Asian countries are actively participating in a new wave of trade and investment agreements. While recent focus has been on the Regional Comprehensive Economic Partnership (RCEP), this chapter analyses the Comprehensive Agreement on Investment (CAI) and the possible expansion of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and their contribution to accelerating trade and investment, as well as to achieving sustainable development.

Free trade agreements (FTA) have come a long way. Once designed as agreements between two or a small number of countries to eliminate tariffs and quotas on trade in goods, they have become broader economic treaties that also liberalise trade in services and foreign investment regulations, while also protecting intellectual property rights, defining competition policy regimes, and establishing environmental and labour protection rules (Dür & Elsig, 2015). These modern trade agreements can be described as 'deep FTAs' regulating trade-related issues 'behind the border'.[1] While the number of newly signed FTAs has been declining since the heydays of the 1990s, their size—in terms of trade covered, or gross domestic product (GDP)—has been increasing, which justifies referring to them as 'megaregionals.' These agreements have become geoeconomic instruments via which rules and standards are set, internationally; similarly, they allow economic powers not only to facilitate the cross-border activities of their domestic companies, but also to export a certain concept of economic governance. European countries are at the forefront of this trend; they negotiate deep FTAs with other economies so as to ensure a level playing field for European companies abroad and to maintain a rules-based international trading system. While European countries have signed FTAs with partners from all world

1 Behind-the-border barriers refer to a variety of non-tariff barriers that operate inside countries rather than at the border but that nonetheless can restrict or discriminate trade.

regions, Asia has received special attention given its centrality for global value chains (GVCs) and economic dynamism.[2]

The purpose of this chapter is to provide an overview of current trade relations between European and Asian countries and to review Europe's Asia trade policies and the challenges they face. These challenges are due to developments in the area of trade and the broadening geoeconomic environment. At least three key challenges need to be mentioned.

First of all, Asian economies have intensified intraregional integration in recent years. The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) was signed in 2016 among 12 economies from Asia and North and Latin America and entered into force—despite the withdrawal of the United States (US)—in 2018. The second major trade agreement in Asia is the Regional Comprehensive Economic Partnership (RCEP), which was signed in 2020 between the ten countries of the Association of Southeast Asian Nations (ASEAN) and Australia, China, Japan, Korea, and New Zealand. These two megaregional trade agreements will accelerate the trend of intraregional integration in Asia and necessitate a policy response from European countries to offset any negative effects.[3]

Second, the US-China conflict will be a defining factor for European trade policymaking in the years to come, in particular, with regard to European trade relations towards Asia. The attempt of the US to decouple its economy from China poses the question of how Europe should position itself towards China, as well as towards the rest of the Asian countries, which are accelerating their trade integration with China despite difficult diplomatic and security relations with Beijing.

Third, Europe and Asia need to find an answer to the crisis of the rules-based international order and associated trends towards de-globalisation. The international trade system, with the World Trade Organization (WTO) as its multilateral core, has been in crisis for a long time and came under severe attacks during the Trump presidency, in the years 2016-2020. However, it is far from certain that the Biden administration, despite its initial multilateral rhetoric, will resist the impulse of inward-looking and protectionist trade policies. Furthermore, the multiple protectionist trade policies seen around the world during the COVID-19 pandemic have shown that these impulses are not limited to the US.

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2 See the contribution of Hubertus Bardt.

3 See the contribution of Jürgen Matthes.

How should European actors define their trade policy towards Asia in this increasingly complex geoeconomic environment? This chapter takes the recent disintegration within Europe into account and will not only focus on the European Union (EU) as the main European trading power, but will also analyse the United Kingdom's (UK) emerging trade policy towards Asia.

The chapter is structured as follows. Section 2 will briefly consider Europe-Asia trade policy, putting it into perspective by means of a general analysis of current trade flows between the two regions. Sections 3 and 4 will dive into the trade policies of the EU and UK with Asia. After providing a general overview of the various trade agreements, the focus will be on the EU's most recent trade and investment agreements with Japan and China, as well as on the UK's bid to join the CPTPP. Section 4 concludes with a review of the policy choices of European trade policymaking towards Asia.

Current Trade Relations

The centre of gravity of the global economy is shifting eastwards, and the Asia-Pacific region is becoming the main area of economic activity. Against this backdrop, it is necessary to briefly review Europe's trade relations with Asian countries—notably those with which the EU and UK have (or are in the process of negotiating) trade agreements. On a general level, it is clear that Asia has become the number one source of imports to Europe, and many supply chains of European companies depend on inputs from Asia. The share of imports from Asia to the EU increased from 39% in 2002 to 45% in 2019.[4]

A closer look shows that most of this growth is driven by one country, China. For both the EU and the UK, China is the main export destination and import source among Asian countries (see Tables 1 and 2). On the export side, China is the fifth and seventh most important export destination for the UK and EU, respectively. Furthermore, regarding imports, China's weight is even greater. For the EU, China is the second largest importer, as well as the number one exporter, if one only looks at extra-EU exports. In the case of the UK, China ranks as third largest importer. As will be discussed in the remainder of this paper, neither the EU nor the UK have a trade agreement with China in place, and given the strained geoeconomic relations, such an agreement is not in sight for the foreseeable future.

4 See the contribution of Hubertus Bardt. The share of imports does not include imports from within the EU.

Table 1. EU exports and imports in 2019, in billion USD

Rank	Trading Partner	Exports	in %	Rank	Trading Partner	Imports	in %
1	Germany	746.8	12.6	1	Germany	769.1	13.0
2	United States	481.2	8.1	2	China	506.2	8.6
3	France	425.6	7.2	3	Netherlands	358.8	6.1
4	United Kingdom	324.7	5.5	4	United States	345.9	5.8
5	Italy	272.6	4.6	5	France	319.7	5.4
6	Netherlands	268.8	4.5	6	Italy	271.9	4.6
7	China	246.2	4.2	7	Belgium	245.1	4.1
8	Belgium	240.9	4.1	8	Spain	201.2	3.4
9	Spain	211.0	3.6	9	United Kingdom	193.7	3.3
10	Poland	187.5	3.2	10	Poland	187.5	3.2
18	Japan	74.3	1.3	16	Japan	97.9	1.7
26	Korea Rep.	51.2	0.9	23	Korea Rep.	61.2	1.0
29	India	46.9	0.8	25	India	56.4	1.0
33	Australia	38.0	0.6	27	Vietnam	51.3	0.9
34	Singapore	37.5	0.6	33	Malaysia	33.3	0.6
53	Thailand	16.1	0.3	37	Thailand	28.7	0.5
54	Malaysia	15.6	0.3	39	Singapore	24.4	0.4
58	Vietnam	12.9	0.2	45	Australia	20.3	0.3
62	Indonesia	10.9	0.2	48	Indonesia	19.4	0.3
63	Philippines	8.8	0.1	59	Philippines	10.8	0.2
72	New Zealand	6.6	0.1	78	New Zealand	4.0	0.1
148	Pacific EPA	0.5	0.0	160	Pacific EPA	1.1	0.0

Source: Based on data from World Integrated Trade Solution (WITS), https://wits.worldbank.org/

The inspection of current import and export patterns reveals two additional insights.

First, both the EU and the UK trade mainly with economies from their own (European) region. Given this strong intraregional trade pattern, trade with Asian economies is of relatively lesser importance (with the exception of China). Furthermore, both in the case of the EU and UK, the US is a key trading partner and transatlantic trade relations are still important despite recent trade policy frictions.

Table 2. UK exports and imports in 2019, in billion USD

Rank	Trading Partner	Exports	in %	Rank	Trading Partner	Imports	in %
1	United States	72.1	15.5	1	Germany	85.7	12.5
2	Germany	46.4	10.0	2	United States	67.1	9.8
3	France	31.4	6.8	3	China	65.5	9.5
4	Netherlands	30.4	6.5	4	Netherlands	53.9	7.9
5	China	30.0	6.5	5	France	38.9	5.7
6	Ireland	27.8	6.0	6	Belgium	32.2	4.7
7	Belgium	16.5	3.6	7	Italy	26.2	3.8
8	Switzerland	15.1	3.3	8	Switzerland	23.7	3.4
9	Spain	13.7	2.9	9	Spain	21.2	3.1
10	Italy	12.7	2.7	10	Norway	19.8	2.9
11	Hong Kong, PRC	10.8	2.3	15	Japan	13.0	1.9
14	Japan	8.3	1.8	17	Australia	10.8	1.6
15	Singapore	6.8	1.5	18	India	9.8	1.4
20	India	5.8	1.3	24	Vietnam	6.0	0.9
21	Australia	5.5	1.2	25	Korea Rep.	5.0	0.7
22	Korea Rep.	4.8	1.0	28	Hong Kong, PRC	4.4	0.6
38	Malaysia	1.7	0.4	31	Thailand	3.8	0.6
45	Thailand	1.5	0.3	40	Malaysia	2.4	0.3
48	New Zealand	1.1	0.2	42	Singapore	2.2	0.3
50	Philippines	0.9	0.2	44	Indonesia	2.0	0.3
52	Indonesia	0.9	0.2	52	New Zealand	1.1	0.2
137	Pacific EPA	0.03	0.0071282	49	Pacific EPA	0.1	0.0

Source: Based on data from WITS, https://wits.worldbank.org/

Second, the countries that the EU and UK sees as trade-policy partners, with which they have agreements in place, or with which they are in the process of negotiations, are of comparatively minor economic importance. The most important Asian country next to China is Japan, and it is the EU's 18th most important export destination, and in the case of imports, it ranks 16th. The picture is similar for the UK. With the exception of China, the (potential) FTA partners of the EU and UK have a limited importance in terms of exports and imports. Other European economies and the US are the main trading partners of the EU and the UK.

Closer trading ties with Asia are nevertheless desirable in light of the increasing integration within Asia and of the region's economic dynamic. Asian countries have engaged in two significant trading initiatives, the RCEP and the CPTPP.[5] These important intra-Asian integration projects risk negatively affecting European countries. In order to counter this, European trade policymaking needs to engage Asian countries.

The EU's Trade Policy towards Asia-Pacific

The EU has the world's largest network of bilateral and regional trade agreements. At the end of 2020, the EU had 44 signed and applied FTAs with 76 countries (European Commission, 2020). With the exception of the Economic Partnership Agreement (EPA) with the Pacific countries,[6] all of the EU's agreements with Asian countries are bilateral FTAs. The FTA with Korea, signed in 2010, and applied since 2011, was the first of the EU's so-called 'new generation' FTAs. These were envisaged in the EU's 2006 trade strategy, Global Europe, and the 2009 Lisbon Treaty provided a reformed legal basis of the EU's trade policymaking. The EU-Korea FTA covers many trade and non-trade issues, such as tariff liberalisation, services, investment, competition, intellectual property, and sustainable development. As such, it has come to represent an important reference point for subsequent FTAs negotiated by the EU (Horng, 2012).

At the centre of the EU's initial strategy towards Asia was a region-to-region FTA with ASEAN. The EU and ASEAN started negotiations in 2007. However, only two years after the launch, the two regional blocs discontinued the negotiations in 2009. The failure of interregionalism may be explained by the EU's desire to negotiate a comprehensive FTA. That desire proved incompatible with the economic and political heterogeneity of ASEAN members, which affected their (un)willingness to sign a high-standard FTA with the EU (Meissner, 2016). The EU fell back to the bilateral approach and initiated negotiations with Singapore (start of negotiations in 2010), Malaysia (2010), Vietnam (2012), Thailand (2013), the Philippines (2015), and Indonesia (2016). The EU views the successful negotiation of these bilateral agreements as building blocks towards a future EU-ASEAN agreement (European Commission, 2021a). However, as yet, it is only the FTAs

5 The CPTPP includes not only important Asian economies but also countries from North and South America.

6 The EU-Pacific EPA was signed in 2009. The EU and Papua New Guinea ratified the agreement in 2011. The agreement is provisionally applied by Fiji (since 2014), Samoa (since 2018), and the Solomon Islands since 2020 (European Commission, n.d.)

with Singapore and Vietnam which have entered into force—in November 2019 and August 2020, respectively. The negotiations with Malaysia, Thailand, and the Philippines are on hold, while the negotiations with Indonesia are ongoing. The EU has also been negotiating an investment-protection agreement with Myanmar since 2013, which has not led to a successful outcome thus far. In sum, the strategic engagement of ASEAN member states as FTA partner countries has met with only mixed success. Only in the case of Singapore and Vietnam—two export-oriented economies with large networks of trade agreements—did the EU succeed to conclude comprehensive FTAs. All other negotiation processes are either discontinued or still ongoing.[7]

A key milestone of the EU's trade relations with Asia was the conclusion and entry into force (effective 1 February 2019) of a comprehensive FTA with Japan, Asia's second largest economy. The (geo)economic significance of the agreement should not be underestimated, as it is the largest FTA the EU has ever signed with another economy, covering close to 30% of global GDP (Chowdhry et al., 2018). The EU-Japan Economic Partnership Agreement (EUJEPA) has been described as a highly comprehensive FTA (Chowdhry et al., 2018). It will lead to a substantial liberalisation of tariffs, including of the EU's agricultural exports, and Japan's exports of automobiles. The agreement will reduce a number of nontariff barriers, in particular, on the side of Japan. The EUJEPA will also lead to a liberalisation of services trade, however, without requiring governments to deregulate public services. The investment chapter provides rules on investment protection, liberalisation, and the prohibition of performance requirements, but does not include an investor-state dispute settlement (ISDS) provision. The agreement, furthermore, contains far-reaching chapters on government procurement, intellectual property rights, competition, regulatory cooperation, and sustainable development. In terms of coverage and depth of commitments, the EUJEPA is similar to other new generation FTAs, such as those between the EU and Korea, Singapore, or Canada. But it also includes some novel features, such as a commitment by the parties to implement the Paris Agreement on climate change or a chapter on corporate-governance standards (Chowdhry et al., 2018).

Negotiations between the EU and Japan started in 2013. It took 18 rounds of negotiations to reach an agreement in principle in July 2017, ahead of the G20 Summit in Hamburg. This was one of the first major global summits attended by former US President Donald Trump, who made no secret of his disdain of rules-based, liberal trading systems. The significance of the EUJEPA therefore

7 The EU has no specific trade policy towards Brunei. Cambodia and Laos are part of the EU's 'Everything but Arms' trade preferences scheme.

goes beyond narrowly defined trading relations, and has a strong geoeconomic dimension too. It has been described as a commitment of the EU and Japan towards a rules-based international trading order (Harding, 2017). As export-oriented economies, the EU and Japan have a joint interest in upholding this order. This is particularly true in view of an increasingly inward-looking and protectionist trade-policy stance by Washington. This began under the Trump Administration—with a withdrawal from the Trans-Pacific Partnership on Trump's first day in office in January 2017—however US trade policy making has not shifted as much as pundits had predicted under current President Biden.

In 2018, the EU launched trade negotiations with two like-minded countries, namely, Australia and New Zealand. The parties aim to conclude ambitious and comprehensive FTAs that should not only facilitate trade, services, and investment flows, but also promote a rules-based international order. Assuming the negotiations with Australia and New Zealand are concluded successfully, the EU would have bilateral FTAs in force with all but two of the 11 members of the CPTPP.[8] Against this backdrop, a region-to-region FTA between the EU and the CPTPP countries might be more conceivable than the initial attempt to form an interregional agreement with ASEAN (Draper & McDonagh, 2021; Hilpert, 2021). The UK's possible accession to the CPTPP may force trade policymakers in Brussels, and EU member states, to consider closer integration with CPTPP. However, while the two blocs have a preference for high-standard trade agreements and converge on a number of issues, important differences remain, such as on ISDS or data protection.

Furthermore, the additional economic effects of closer EU-CPTPP trade relations should not be overstated, as trade and nontrade barriers are already lowered due to the various bilateral FTAs in place or under negotiation. The key significance of such an interregional agreement would be the upholding of a rules-based, liberal trading order in the Asia-Pacific as a counterweight against China's state-led economic system (Draper & McDonagh, 2021).

The EU's trade relations with India are more complicated. On the one hand, India is one of the key economic powers in Asia, and is often viewed as a potential counterweight to China. India therefore plays a key role in the EU's external-relations outlook towards Asia-Pacific. On the other hand, India's economic policymaking has become increasingly inward-looking and protectionist. This trend has become evident through India's withdrawal from the RCEP negotiations,

8 The EU hast not launched FTA negotiations with Brunei and has discontinued negotiations with Malaysia.

in 2019. Despite these challenges, the potential of an FTA between the EU and India is significant due to the size and complementarity of the two economies. Furthermore, current trade barriers are high, which may lead to significant trade-flow increases. Trade negotiations between the EU and India were initiated in 2007, but were abandoned in 2013. The main sticking points that troubled EU-India trade negotiations relate to agriculture, services (including the movement of people), digital trade, patent protection for pharmaceutical goods, as well as environmental and labour rights (Poitiers et al., 2021). Most of these issues remain contentious to this day, and will also be key challenges in reviving trade negotiations.

Against this backdrop, it is a noteworthy development that the EU and India agreed to reopen trade negotiations at their summit in May 2021. The reasons that led to this significant change of course are diverse. On the side of India, its dissatisfaction with existing trade relations with Asian partners, and its rivalry with China, may be part of the explanation. Furthermore, the economic crisis in India, aggravated by the COVID-19 pandemic, may also play a role in forcing the Modi government to seek closer trade relations with the EU. On the side of the EU, India could become an increasingly important trading partner in a region that is integrating further via both RCEP and CPTPP. Finally, the competition with the UK, which has also entered into trade negotiations with India, may be another motive for EU trade policymakers to approach India (Poitiers et al., 2021). Despite these changes, which are often driven by geoeconomic rationales, the fundamental challenges to a comprehensive EU-India FTA remain, and the outcome of this negotiation process is open.

A stronger economic impact could be expected from an FTA between the EU and China—a possibility that has, paradoxically, become less likely due to the conclusion of the Comprehensive Agreement on Investment (CAI) between the EU and China. Negotiations on the CAI between the EU and China were underway since 2014, but it took the two economic heavyweights 35 rounds of negotiations to reach an agreement in principle, in December 2020. Despite these efforts, the CAI does not address all the initial negotiation objectives of the EU. The EU wanted to negotiate an agreement that would cover both investment protection and market access. As such, it was hoped that the conclusion of the CAI would replace the 25 bilateral investment treaties signed by EU member states individually with China. These bilateral treaties were negotiated during the 1980s, 1990s, and early 2000s and included outdated yet overly investor-friendly rules backed up by ISDS provisions (Berger, 2019).

The CAI focuses on market access, technology transfer, regulatory cooperation, and sustainable development (European Commission, 2021b). The additional market access granted by China is limited to some sectors, such as electric vehicles or financial and air-transport services. Perhaps the key outcome of the CAI is the preservation of existing market access both in China and the EU. The CAI includes rules that prohibit forced technology transfer and joint-venture requirements; so-called 'level playing field' provisions with regard to subsidies; rules to ensure procedural transparency, as well as predictability and fairness of regulatory and administrative procedures; and regulations for state-owned enterprises (Bickenbach & Liu, 2021). Last but not least, the CAI includes a sustainable-development chapter, with many standard provisions from EU FTAs—these are, however, to be considered best-effort clauses (Berger, & Chi, 2021). It therefore remains to be seen whether China is willing to follow up on its non-binding commitments, in particular, in the area of labour rights.

Importantly, the CAI does not include provisions on investment protection or ISDS. The EU's insistence on replacing the traditional ISDS clauses with its new *investor court system* may explain this omission (Berger, & Chi, 2021). Both parties agreed to continue negotiations on investment protection and dispute settlement to replace the existing 25 bilateral investment treaties. The fate of these negotiations—and, more importantly, of the CAI as such—is uncertain in light of the recent worsening of diplomatic relations between China and the EU. As a result of the EU's decision to impose sanctions on four Chinese officials over human rights abuses against the Muslim Uyghur minority in the Xinjiang region, China imposed sanctions on several European politicians and individuals. As a result, the European Parliament decided to freeze the ratification process of the CAI (European Parliament, 2021). Achieving the successful conclusion of the CAI was considered by the EU as an important precondition to starting negotiations of a full-blown FTA with China. Recent developments make it unlikely that an investment agreement, let alone a trade agreement, between the EU and China can enter into force in the near future.

The uncertain future of the EU's trade relations with China will also have repercussions for its relations with ASEAN. A region-to-region agreement between the EU and ASEAN has become more unlikely, as ASEAN has intensified its integration efforts with its ASEAN+1 dialogue partners within the RCEP framework. Closer integration with the ASEAN-led RCEP, as discussed by some,[9] would also imply a bilateral EU-China trade agreement, which is, at present, inconceivable. Closer cooperation with like-minded countries from the Asia-

9 See the contribution of Jürgen Matthes.

Pacific, building on existing bilateral trade agreements and negotiations, should therefore be the preferred option for EU trade policymaking—and the CPTPP may be the right platform for this.

The UK's Post-Brexit Trade Policy towards Asia-Pacific

After Brexit, which is quintessentially the UK's decision to move away from the EU as its main trading partner, one of the key strategic decisions of the British government was to reorient its foreign and trade policy towards the Asia-Pacific region. The 'Integrated Review,' a strategy paper that describes the UK's new external relations after Brexit, explicitly mentions ASEAN and the CPTPP as key collective actors, with which the UK desires to engage more closely (United Kingdom, 2021). It is therefore wholly unsurprising that the UK was active in rolling over some agreements it had signed with this region while still being part of the EU. The so-called 'trade continuity agreements' entered into force, or were provisionally applied, with South Korea, Singapore, Vietnam, and the Pacific states (Dept. for Intl. Trade, 2020).

Additionally, the UK government managed to sign two new agreements with Japan and Australia in an exceptionally short period. A new Comprehensive Economic Partnership Agreement (CEPA) was negotiated within less than half a year with Japan and entered into force in December 2020. The UK-Japan CEPA largely replicates the EUJEPA but diverges from the EU's agreement with Japan in a few important areas, such as e-commerce (Morita-Jaeger & Ayele, 2020). Similarly, the UK reached an agreement in principle with Australia in June 2021 (Dept. of Foreign Affairs and Trade, 2021). This agreement will comprehensively, and more or less immediately, eliminate tariffs and quotas on bilateral trade between the two economies. This 'unprecedented' level of trade liberalisation is especially welcomed from the perspective of Australia, as ex ante trade barriers were higher in the UK than in Australia. It may, however, be less welcomed by certain groups in the UK, such as farmers, who will face increased competition from Australian imports (Grozoubinski, 2021). Nevertheless, the overall economic impact of the FTA with Australia will be limited. The UK's exports to Australia may increase by 0.35%, and Australia's exports may grow more strongly by 2.2% (Gasiorek & Larbalestier, 2021). The rush to sign the agreement with Australia without entering into the typical substantive and often time-consuming negotiations of detailed provisions may be a result of the British government's interest in signing the agreement, at least in principle, on the sideline of the G7 Summit in Cornwall, which took place in June 2021 (Payne & Romei, 2021).

The UK is in the process of negotiating FTAs with other Asia-Pacific countries. It is negotiating FTAs with New Zealand and India. However, the most high-profile negotiation process currently underway is the one with the members of the CPTPP. In February 2021, the UK applied for membership to the CPTPP (Dept. for Intl. Trade & Truss, 2021).[10] Notwithstanding the US' decision to withdraw from the agreement it helped build, the CPTPP remains one of the largest and most-advanced trade agreements currently in force. It accounts for almost 15% of world trade and includes a number of far-reaching rules, for instance, on e-commerce, investment, and the environment.

Accession to the CPTPP offers the United Kingdom, having only recently regained the competency to negotiate its own trade agreements, the chance to sign a single trade agreement with 11 economies of the dynamic Asia-Pacific region. However, the UK already has trade agreements in place with seven of the 11 CPTPP members, including with the Asian economies, Japan, Singapore and Vietnam (Matsuura, 2021). The additional market access for the UK as a member of the CPTPP will therefore be limited (Gasiorek et al., 2021). The UK may benefit from more flexible use of rules of origin within a regional grouping compared to the 'spaghetti bowl' of bilateral treaties. However, the geographic distance makes it difficult to use this advantage to import tariff-free intermediates from the CPTPP countries for use in products that are then exported back to the CPTPP region (Gasiorek et al., 2021). These relatively modest gains from CPTPP accession have, thus, to be weighed against the potential risks of, for example, regulatory divergence with the UK's main trading partners, such as the EU. The CPTPP is ultimately a US-style FTA that includes a number of provisions—for example, on e-commerce, ISDS, or regulatory coherence—that are different to EU-style FTAs. Joining the CPTPP may therefore increase the transactional costs of trading with the EU, or with countries that adopt the EU's standards, due to divergent regulatory regimes (Morita-Jaeger, 2021).

What is clear is the high importance the UK places on the Asia-Pacific region in its new post-Brexit trade policy. Under the headline 'Global Britain', it is engaged with a host of Asia-Pacific countries to pursue existing, or negotiate new, trade agreements. The rolling over of trade agreements that Britain had signed while still being a member of the EU is important to stabilise trade relations, but they will not yield substantial additional economic benefits. As previously mentioned, the UK rushed into trade negotiations with Japan and Australia, and has applied for membership of the CPTPP. In these negotiations, it appears to be a rule-taker,

10 The CPTPP includes Japan, Australia, Canada, New Zealand, Vietnam, Singapore, Malaysia, Brunei, Mexico, Chile, and Peru.

willing to accept the terms proffered by its counterparts. The benefits of its trade agreements with Asia-Pacific countries are, therefore, more likely to be of the diplomatic, rather than economic, kind.

A different (economic) matter would be if the UK were to negotiate and sign a trade agreement with a larger trading power, such as the EU, the US, or China. The UK has signed a Trade and Cooperation Agreement with the EU, which has been provisionally applied since January 1, 2021, and entered into force on May 1, 2021. The agreement, however, is far less advantageous than the UK's previous EU membership, including regarding its access to the internal market. Trade negotiations between the UK and the US were formally launched in May 2020. While four rounds of negotiations took place until September 2020 under the Trump administration, it remains to be seen if and when the Biden administration continues them. A trade agreement with China is not in sight, and the recent worsening of diplomatic relations between London and Beijing make closer UK-China trade relations unlikely in the near future.

Conclusion

Asian economies are key partners of European trade policymaking. The EU and UK have launched a number of trade policy negotiations with Asian economies. Trade integration in Asia is increasingly conducted in the context of megaregional trade agreements, such as the CPTPP and the RCEP, with 11 and 15 members, respectively. In contrast, European countries have had to resort to bilateral negotiations, in particular, after the EU's initial plan to negotiate a region-to-region agreement with ASEAN failed.

The UK's decision to apply for membership of the CPTPP may be a first step towards a more comprehensive approach. Whether Brussels follows London's lead and tries to negotiate an interregional agreement with the CPTPP remains to be seen. Independent of this strategic decision, the EU should advance and conclude the ongoing negotiations with countries such as Australia, New Zealand, and Indonesia. Furthermore, it should try to reengage countries such as Malaysia, Thailand, the Philippines, and India. Closer cooperation with Asian economies is important not only to secure access to the growing Asian market, but also to counter China's attempts to export its state-led economic system.

The crucial challenge for European trade policymaking is to establish their position within the wider context of worsening geopolitical rivalry between the US and China. While a strong transatlantic relation is of key importance for both the EU and UK, and stronger ties with China are more controversial, the Asian region remains of importance as a whole. While the UK is not attempting to enter

into trade negotiations with China, the EU has learnt a hard lesson in view of the increasing resistance within Europe against the CAI, which makes the vision to start negotiations towards an EU-China FTA highly unlikely in the short to medium term. China, nevertheless, remains an important actor the EU needs to engage in order to reform the WTO, which forms the main set of rules underpinning the trade relations between Europe and China.

Axel BERGER is a senior researcher at the German Development Institute/ Deutsches Institut für Entwicklungspolitik (DIE), Programme Transformation of Economic and Social Systems. He heads the G20 Policy Research Group at DIE and led the T20 Task Force on Trade, Investment, and Tax in 2017, 2018, and 2019. Axel holds a doctorate in political science from the University of Duisburg-Essen and a master's degree from the Munich Ludwig-Maximilians-University in political science, economics, and modern history. He works on the design, effects, and diffusion patterns of international trade and investment agreements, with a focus on emerging markets and developing countries. Other areas of current research include the effects of an international investment-facilitation framework, the impact of free trade agreements on upgrading within global value chains, and the role of the G20 in global governance. He teaches international political economy at the University of Bonn and regularly advises developing countries, development agencies, and international organisations on trade and investment matters.

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On the Relevance of Free Trade Agreements in the Asia-Pacific: A European Perspective

Jürgen MATTHES

Abstract

The Asia-Pacific has gained more attention in Europe recently, mainly due to its economic and geopolitical relevance, as compared to other world regions. Moreover, the European Union (EU) increasingly sees the need to diversify economic ties away from China, due to their increasingly strained relations. This article suggests new ways to achieve this aim.

The Asia-Pacific Region from an EU Perspective

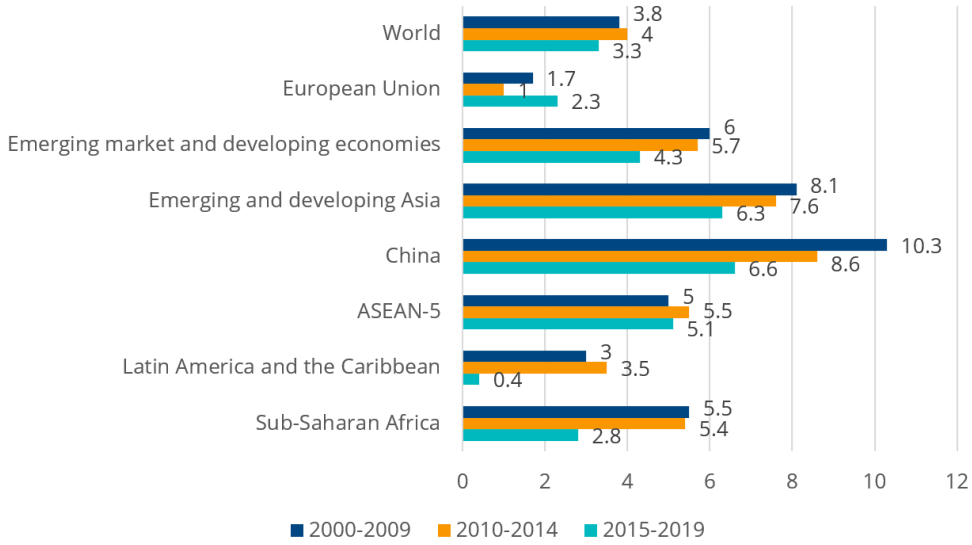
The economic and political role of the Asia-Pacific

From the perspective of the EU, the Asia-Pacific is an important economic and political partner. In economic terms, the region consists of countries with very large populations (and thus large markets)—the largest being China, India, and Indonesia. Moreover, even when one excludes advanced nations like Japan, South Korea, and Singapore, the region is still thriving economically, as compared to other developing and emerging regions of the world.

Based on the International Monetary Fund (IMF) country groupings, Figure 1 illustrates below that economic growth rates in emerging and developing Asia (EDA) are high compared to all other country groupings—be it the EU, the entire world, the average of all emerging and developing economies, Latin America, or Sub-Saharan Africa. On closer inspection, a differentiation is warranted within the EDA group between very fast-growing China and the rest. A subgroup of the Association of Southeast Asian Nation (ASEAN) bloc, the ASEAN-5 countries—Indonesia, Malaysia, the Philippines, Thailand, Vietnam—illustrate this rapid growth rate. While these economies have grown less rapidly than China, they accomplished, impressively, an average growth rate of more than 5% per year since 2000. As a result, their economic growth has been much

more dynamic than that of Latin America and, in recent years, also of Sub-Saharan Africa.

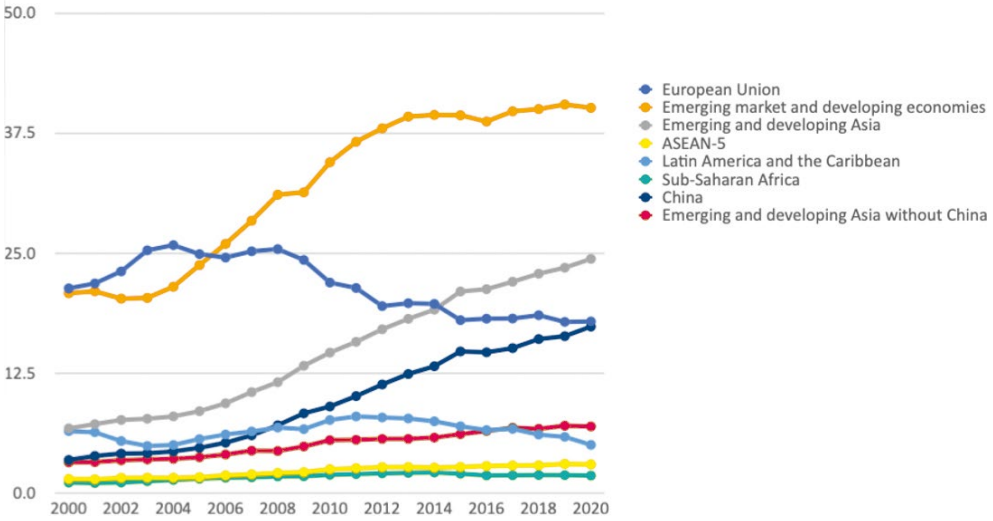
Figure 1. Economic growth in comparison: Change of real GDP (year on year), annual averages (%)



Sources: IMF; German Economic Institute

Figure 2 underlines the essence of this comparison. It shows that the economic relevance (measured as the share of global GDP in current US dollars) of the ASEAN-5 (3.1% in 2020) is already larger than all of Sub-Saharan Africa (1.9%). This data also allows for the calculation of the total share of the EDA group, excluding China, which amounts to 7.0% in 2020. This share is significantly higher than the share of Latin America (5.1%), which has declined nearly continuously since 2011. However, Figure 2 also illustrates the large economic weight of China, which has contributed not only to the impressively rising share of the whole Asian group, but also to that of the EDA economies.

Figure 2. Global economic relevance: Share in global GDP in current USD (%)



Sources: IMF; German Economic Institute

This large economic weight is also reflected in the high relevance of China as a trading partner for the EU, with a share of 16% in terms of merchandise trading volume. By comparison, other Asian countries, including advanced economies, are much less important on an individual basis, be it Japan (3%), South Korea (2.5%), India (1.8%), or countries such as Vietnam, Singapore, and Malaysia with about 1% each. However, as relations with China have become more challenging in recent years, there is a tendency in the EU to increasingly diversify economic relations so as to reduce reliance on China and focus more on the Asia-Pacific region as a whole (for options regarding how to achieve this, see Section 3).

With the goal of diversification in mind, the EU and several of its member states (for instance, France and Germany) have recently published strategy papers on broadening not only the economic but also the political ties in the Asia-Pacific, designated as the Indo-Pacific for this purpose (Auswärtiges Amt, 2020; EEAS, 2021). In addition to the economic importance of the region, the EU recognises the relevance of the Asia-Pacific when it comes to upholding an open and rules-based global trading system in view of rising geopolitical tensions. Moreover, issues like security of sensitive supply chains and of maritime trading routes come into play. In fact, according to the EU strategy, about 60% of global maritime trade passes through the oceans of the Asia-Pacific, including the South China Sea, where geographical tensions have risen recently. The EU considers that its offer of cooperation could be of considerable interest to such Asia-Pacific nations, as

they—akin to the EU themselves—often toe a delicate line so as not to choose sides between the United States and China.

The current EU approach to deeper economic integration with the Asia-Pacific

The EU and several countries of the Asia-Pacific have already signed a number of important trade agreements. As such, there is a basis to build upon for further cooperation. However, the key drawback is that the current approach does not appear particularly effective in terms of reaching all the new partners.

Important and successful bilateral free trade agreements (FTAs) exist between the EU and Japan, South Korea, Singapore, and Vietnam; additionally, FTA negotiations are or were underway with other countries in the region. Relatively good prospects are seen for deeper trade cooperation with Australia and New Zealand. However, negotiations with the important and fast-growing countries of the ASEAN-5 (excluding Vietnam) have proved to be very difficult. This pertains to Indonesia, Malaysia, the Philippines, and Thailand. The EU insists on implementing its ambitious standard approach in this respect, as such, conflicts over human rights or sustainability (mainly social and environmental standards) are key impediments. This pertains, for example, to the lack of a democratic government in Thailand and to the environmentally challenging production of palm oil in Malaysia and Indonesia. As a result, FTA negotiations with Indonesia have proved to be very difficult, while those with Thailand, Malaysia, and the Philippines have been put on hold.

The same is true for FTA negotiations with India, mainly because ambitions for liberalisation on both sides proved incompatible. However, there have been recent high-level political statements on both sides in favour of restarting FTA negotiations. From the EU's perspective, this step has to be seen in the context of the above-mentioned Indo-Pacific strategies. In economic terms, India, with its very large population, is an important economic player in the region, and thus also an important partner for the EU, especially if the dependency on China is to be reduced. In geopolitical terms, the recent political and military tension with China render India a key ally to counter China's territorial ambitions in the region. The United States has also recently intensified its relations to India mainly for this reason. However, the prospects of an EU-India FTA might still encounter difficulties due to India's protectionist stance. Whether geopolitical considerations will be a sufficient counterweight remains an open question.

In late December 2020, the European Commission (EC), concluded negotiations with China on a bilateral Comprehensive Agreement on Investment (CAI). However, the likelihood of ratification is not high. The CAI would not liberalise tariffs on both sides, as it is not a trade agreement. However, the EU has advocated for greater reciprocity in bilateral investment relations. The EU is, in principle, completely open to foreign direct investment (FDI) and corporate takeovers from non-European countries. In contrast, China has traditionally implemented a highly restrictive approach to FDI, and remains far more restrictive than advanced European economies, as data from the Organisation for Economic Co-operation and Development (OECD, 2021) suggests.

China used to demand that foreign companies enter into joint ventures with Chinese firms (as majority owners) in many sectors, thereby gaining access to modern technologies. However, the EU (and the United States) grew increasingly critical of this form of indirectly forced technology transfer (Matthes, 2020a). In recent years, China has loosened some of the former constraints, albeit mostly in sectors where the Chinese government considers the technological development of domestic firms to be sufficiently advanced. The CAI would mostly be a tool to lock in these reforms (i.e. to prevent China from withdrawing the recent concessions).

The conclusion of the CAI negotiations under the German EU presidency has attracted criticism for several reasons:

- As indicated above, the ambition and scope of the CAI are relatively limited.
- The timing was heavily criticised to offend the Biden administration, which was not yet in office in December 2020. China clearly intended to sideline the United States and, to this aim, appeared to have put some additional concessions on the table in order to create the (teasing) impression that the EU would not get any further concessions on top of this, even in case of longer negotiations. Moreover, Brussels obviously wanted to demonstrate strategic autonomy vis-à-vis the United States—bearing in mind that the Trump administration had concluded a limited bilateral (Phase One) trade agreement with China in January 2020.
- Even though China may have put some additional concessions on the table in December, there is a lack of additional investment market access, so that even with the CAI, there would still be a severe lack of reciprocity. Had the EU waited for closer alignment with the Biden administration over the course of 2021, Brussels might have been able to extract more concessions from China.

- Beijing used the CAI to present itself as a state that favours liberalisation over protectionism—again offending the US and its approach under the Trump administration.
- China got away with relatively vague concessions on labour standards, the enforcement of which was also unclear.
- The EU attempted to separate economics from values. Despite multiple human rights abuses by the Chinese government, the EU offered China a platform to present itself as a normal negotiating partner. What is more, after the CAI, China continued to clamp down, particularly on Hong Kong.

Due to these drawbacks and developments, the pressure on the EU to face the challenges vis-à-vis China increased.

- Concerning the human rights abuses in Xinjiang, the EU issued (very limited) sanctions on certain Chinese individuals in March 202—in conjunction with the US and several other democratic countries. As China retaliated furiously, also targeting members of the European Parliament and several European institutions critical of China, the current prospects for ratification of the CAI remain dim as long as these sanctions remain effective.
- The EU continued to develop additional economic instruments to level the playing field in view of distorted competition from China. Immediately after the conclusion of the CAI, the fear arose that this process of levelling out might be stopped for diplomatic reasons during the course of both sides' ratification. This would have been a serious mistake, as competitive distortions due to China's state capitalism (i.e. subsidies and state-owned enterprises) are increasingly felt by European and also German companies (Matthes, 2020b; 2021).

The EU is therefore rightly developing new instruments to expand its toolbox so as to better counter these unfair distortions of competition. This pertains, for example, to an EC proposal to target foreign subsidies in the single market. The proposed regulation would close a regulatory gap by introducing the possibility of targeting foreign firms which are active in the EU market, and which benefit from subsidies granted to them by their home governments. After several years without progress, the Council agreed to introduce a so-called *international procurement instrument* (IPI) as a tool to achieve better balance in bilateral reciprocity. The IPI would allow the EU to limit or prohibit access of foreign firms to its public procurement market if the firm's home country does not sufficiently open the domestic procurement market for EU firms. These instruments are not specifically targeted at China, but apply to all third countries.

The Relevance of RCEP

In November 2020, the Regional Comprehensive Economic Partnership (RCEP) was signed; it includes the ASEAN countries, plus China, Japan, South Korea, Australia and New Zealand. RCEP has entered into force in January 2022 among the countries that concluded the national ratification processes in 2021 and leads to a free trade zone larger than that of the EU. From an EU perspective, RCEP must be considered with the above-mentioned facts and developments in mind. While it has been hailed in the media as a major breakthrough for regional economic integration, favouring particularly China's role in the Asia-Pacific, on closer inspection, RCEP loses some of its gloss. This regards both the extent of trade liberalisation, and China' role in RCEP.

Key features of RCEP

In terms of quality and depth, RCEP is not comparable to the EU's modern FTAs, which involve much more trade liberalisation, and establish many more new standards for trading partners. In many respects, RCEP has had to limit itself to a lowest common denominator approach, partly because its members' development levels are so heterogeneous.

Already prior to RCEP, the Asia-Pacific had achieved intensive economic integration in terms of cross-border value chains in important manufacturing sectors, particularly in the electronics industry. This development had been fostered by many (albeit fairly shallow) bilateral FTAs among many countries. However, this approach had led to a complex web of overlapping FTAs—the *spaghetti bowl effect*, a term coined by the renowned economist Jagdish Bhagwati many years ago. This burdens businesses, particularly SMEs, with high administrative trading costs due to different regulations in the various bilateral FTAs (see below).

1. Limitations

RCEP is not very ambitious when it comes to tariff dismantling.

- Unlike in many EU FTAs, where nearly all tariff lines are reduced to zero on average, in RCEP only around 90% are; in some bilateral trade relations among RCEP members, the share is even smaller.
- Many tariffs are only reduced over a very long period of up to about 20 years, and the tariff reduction of sensitive goods tends to be backloaded for political-economy reasons.

- Tariff reductions are established in complicated ways. Each RCEP partner has its own very extensive tariff-reduction list, which details exact schedules of tariff reductions over time for thousands of product groups.

- The ten-country ASEAN alliance were already signatories to a regional trade agreement, as well as to numerous bilateral FTAs between ASEAN and the other RCEP partners. Thus, tariffs had already been reduced in these FTAs in the past. Therefore, the added value of RCEP is small. According to a calculation by the *Economist* (2020), around 83% of the trade flows of around 2,300 billion USD are already accounted for by existing agreements within RCEP.

- Unlike EU FTAs, liberalisation is also limited in relation to trade in services (DFAT, 2020; Pelkmans, 2020). The main aspect RCEP partners agree to is that the existing extent of liberalisation will be maintained and cannot be restricted again (lock-in). While this does not create new openings, it does create more legal certainty and transparency. In addition, some countries have made certain new concessions in individual services sectors (Matthes & Kolev, 2020).

- Moreover, the agreement contains hardly any new standards. In the case of product standards, it refers only to World Trade Organization (WTO) rules. Environmental and social standards are not included. And there are no new regulations against distortions of competition by state-owned enterprises (DFAT, 2015).

2. Progress

However, there are also areas where RCEP leads to relevant progress in trade liberalisation or facilitation.

- Significant additional liberalisation is envisaged between Japan, South Korea, and China. While these countries had been negotiating a trilateral trade agreement for some time already, they had not reached an agreement before RCEP. Within RCEP, they are by far the three most important countries in economic terms. However, the extent of reciprocal tariff reductions appears to be somewhat more limited than the RCEP average in terms of coverage and transition periods (Matthes & Kolev, 2020).

- RCEP reduces the administrative trading costs of the spaghetti bowl effect of FTAs to a significant degree by consolidating the multiple bilateral FTAs which already exist between RCEP members. Unifying rules of origin is

particularly important in this respect (PIIE, 2020). Rules of origin in a trade agreement specify which extent of the value of a given exported product must be produced within the territory of a signatory country, rather than in a third country, in order to benefit from the tariff preferences of the agreement when the good is exported to the partner signatory country. The existing FTAs also contain such rules of origin. However, the rules differ depending on the specific bilateral trade agreement. Given the many overlapping bilateral agreements, businesses faced high administrative trading costs, and thus a reduced incentive to take advantage of agreements' benefits in terms of tariff preferences. By unifying the rules of origin, RCEP greatly reduces these administrative trading costs. It is also important that a given RCEP country is able to include the value-added produced by other third RCEP countries in the future when calculating whether the requirements for tariff preferences are met. This will further increase the exchange of intermediate inputs in the region.

While RCEP does not remove many trade barriers, it builds on the principle of progressive liberalisation that ASEAN has already employed before. The agreement provides various mechanisms to potentially expand trade liberalisation in the future. In the case of services, for example, a forward-looking, most-favoured-nation clause applies. Accordingly, if an RCEP member offers better service-market access to a third country in a future FTA, the same concession will automatically apply to all other RCEP countries. In addition, if an RCEP member liberalises unilaterally in the future, this progress is made permanent by means of a so-called *ratchet clause*. Furthermore, a separate secretariat for RCEP is to be established, which can coordinate negotiations on further liberalisations or on the creation of new standards.

3. Overrated role of China in RCEP

In the reception of RCEP in Europe, the agreement was portrayed as a success for China, enabling Beijing to impose its mark and standards on the region. In some cases, it was also said that RCEP had come about under China's leadership (Spohr & Reinartz, 2020). However, China's role and relevance within RCEP ought to be viewed in a differentiated manner. Contrary to the above claims, RCEP was initiated and driven by the ASEAN countries and not under China's leadership (Matthes & Kolev, 2020). Along with Japan, South Korea, Australia, and New Zealand, China is one of five countries with which ASEAN already had a bilateral FTA. The goal for the ASEAN states was primarily to consolidate the aforementioned complex thicket of bilateral FTAs in the region.

For China, participation nevertheless means a political success—in several respects that are also relevant for Europe. First, China was allowed to participate—presumably because of its outstanding economic importance—even though there are considerable political and economic conflicts in the region, and even though Japan, South Korea, Australia, and New Zealand are political allies of the United States. Second, China participates, while its geopolitical rivals such as India and the United States do not. Third, the communist leadership in Beijing can use RCEP to portray itself as an advocate for liberalisation, sending a signal against US protectionism, as it did with the CAI. These advantages of RCEP have apparently prompted the communist leadership to agree to the planned tariff reduction vis-à-vis Japan and South Korea, as well as to further trade liberalisation in services.

In the EU, there is a concern that China will use RCEP to further expand its influence in the region in the medium term by using RCEP's progressive liberalisation opportunities (Drysdale & Armstrong, 2021). For example, China could increasingly spread its domestic product standards under RCEP, which would be in line with its goals under the China Standards 2035 strategy. However, Japan and South Korea are likely to use their influence in RCEP to oppose unwelcome Chinese standards. In addition, China is expected to take advantage of easier market access to invest (even) more in the RCEP region, including in the context of the Belt and Road Initiative, which will naturally further strengthen China's role in Asian value chains.

Relevance for the EU

RCEP is directly relevant for the EU in economic and political terms. On the *economic* side, outsiders to FTAs are generally affected mainly by two contrasting effects (Glania & Matthes, 2005). Firstly, a positive effect for outsiders, is that they too will benefit from the stronger growth in FTA members' markets, which is generally triggered by the increased trade liberalisation. The second main effect for outsiders is, however, negative. When FTA partners grant each other mutual benefits in the form of tariff preferences, they automatically discriminate against third countries, with the latter's products losing relative competitiveness. These negative effects are greater, if the external tariffs for third countries are high, if trade liberalisation among FTA members is large, and the transition period is shorter. These trade-distorting effects can be further exacerbated by restrictive rules of origin, which disfavour value-added from third countries.

In the case of RCEP, the extent of liberalisation is moderate in the aggregate. Before its conclusion, it was estimated that RCEP would raise global GDP by 186 billion USD (0.1%) in 2030, compared to a baseline scenario before the trade war

between the US and China (Petri & Plummer, 2020). For Europe, an income gain of 13 billion USD (0.1% of GDP) was calculated, alongside small export losses of 4 billion USD, both in 2030 compared to the baseline. Thus, positive and negative effects appear to broadly outweigh each other.

On the positive side for the EU, there are some expansionary market effects. RCEP's rules of origin are relatively generous with regard to value-added from third countries. This improves the possibility for European firms to participate in the additional growth in the region. On the other hand, there are also trade diversion effects. Here, a distinction is required. In cases where RCEP limits itself to consolidating existing FTAs without significant additional tariff decreases, negative effects on third countries are likely to remain small. The situation is different in the trilateral relationship between Japan, South Korea, and China, where tariffs are being significantly dismantled, albeit with considerable exceptions and, in some cases, long transition periods. This could, potentially, result in disadvantages for the EU relative to the current situation. A more detailed look at the tariff dismantling lists of the three countries is necessary for a more precise assessment of the trade diversion effects.

RCEP may also increase incentives to relocate production from Europe to Asia. This is more likely (1) the larger the diversion effects are, and (2) the more attractive the market growth in the region proves to be. These effects apply more to Japan, South Korea, and China, and less so to remaining RCEP countries. Moreover, RCEP will lead to an expansion of intraregional value chains, in which European firms will likely wish to participate. As such, European companies with an existing presence in the region will benefit from facilitated intraregional trade, thereby increasing the offshoring incentive.

In *political* terms, RCEP has been a wake-up call for the EU. RCEP has signalled that Asian countries will not wait for the EU to get on board. Instead, regional integration is moving forward—with the participation of China, and without that of the EU (or, indeed, of the US). Thus, the EU should reconsider its approach to the Asia-Pacific. Strategic considerations should become more important. In particular, the EU should be prepared to make compromises in the above-mentioned conflicts with the larger ASEAN countries in order to move forward with FTA negotiations. However, an even more far-reaching strategic analysis appears necessary.

Options for a more ambitious EU approach to economic integration with the Asia-Pacific

The EU should consider broader forms of economic integration. Efficiency considerations regarding speed and negotiating capabilities would suggest seeking trade agreements with larger groups of countries. Such interregional negotiations allow efforts to be pooled. While the different interests of individual participants in interregional approaches certainly make negotiations more complex and intensive, such an approach should significantly reduce human resources required compared to many individual bilateral negotiations.

Applying for accession to RCEP?

The EU had originally planned to walk down this avenue and negotiate an interregional FTA with the ASEAN as a whole. However, among other issues, the above-mentioned obstacles with the individual ASEAN members stood in the way. In consequence, the EU chose the bilateral path—with the limited results pointed out above. If the EU reconsidered its strategic approach, an agreement with ASEAN might become possible again. Moreover, were the EU to focus on a broad-based trade approach, and therefore to apply to join RCEP, it would offer an even larger interregional partnership than ASEAN. Thus, RCEP could potentially be a suitable platform from which to foster the EU's economic relationship with the Asia-Pacific.

This initiative towards interregional negotiations is considered in the next section. Even though this might not be taken as a panacea, it is assumed, for the purpose of the following consideration, that RCEP members could favourably consider an accession by the EU under suitable circumstances. From the perspective of the EU, several criteria need to be taken into consideration when contemplating an interregional agreement, such as:

- the extent of additional market access that might be achieved (in this case, in the Asia-Pacific),
- the relevance of own market access concession the EU would have to provide,
- the extent of administrative trading costs involved,
- the existence of rules for fair competition, and against market distortions induced especially by industrial subsidies,
- the existence of standards on sustainability and human rights in the relevant trade agreement, and
- the role of China.

As already mentioned, an accession to RCEP would considerably reduce administrative trading costs compared to those incurred through bilateral FTAs between the EU and RCEP countries on an individual basis. The additional criteria can be analysed with particular reference to China, which plays a relevant role in this respect. Regarding market access, participating in RCEP would avoid the above-mentioned trade diversions at the expense of European firms that are likely to occur in China (as well as in Japan and South Korea). But participating in RCEP would very likely also mean a significant reduction of EU trade barriers with regard to China. While this step would be advisable in principle, the trade distortions of China's state capitalism prohibit such a step because it would lead to a further increase in unfair competition by China within relevant EU industries. In addition, joining RCEP could also limit the EU's scope to use trade-defence instruments vis-à-vis China's dumping or subsidisation strategies. Moreover, the additional aim of the EU of being part of a trade agreement with sufficiently ambitious rules on fair competition, as well as on sustainability and human rights standards, would also very likely not be viable in the case of China's participation in such a group. These considerations clearly speak against joining RCEP and in favour of choosing an interregional FTA without China's participation.

To this aim, joining the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) could be an option (Matthes & Kolev, 2020). However, in the following section, an even more far-reaching option is considered.

Proposal for a multi-regional trade partnership of like-minded countries

In a context of enlarging contacts to the Asia-Pacific, and also in relation to the strategic geoeconomic systemic rivalry between market and non-market economies, Matthes and Kolev (2020) propose a plurilateral interregional FTA of market-oriented, like-minded countries with global reach, aiming at several objectives simultaneously.

This mega FTA could be named the Pluri-regional Trade Partnership of Like-Minded Countries (PTPL). It would include, inter alia, the EU, the US, Japan, Canada, the United Kingdom, Switzerland, and potentially many market-oriented emerging economies in the Indo-Pacific region and beyond. Besides trade liberalisation, the main objective of this FTA would be to create modern trade rules that could form a blueprint for reformed WTO rules. This is particularly needed in view of the global distortions of competition emanating particularly from China's state capitalism, as these distortions increasingly endanger welfare and jobs in the EU and in other market-oriented countries. Reformed global competition rules would allow small amounts of industrial subsidies, and the

use of market-oriented state-owned enterprises (SOEs), but prohibit outsized subsidies and SOEs that do not act in a competitively neutral manner.

PTPL would aim at several objectives simultaneously:

- establishing a more prominent role for the EU in the Indo-Pacific,
- avoiding the transaction costs of the 'spaghetti bowl effect',
- creating modern trade rules for a prosperous future in a liberal global trade order,
- incentivising cooperation of nonmarket economies on creating fair global competition rules by offering a blueprint for reforming WTO rules on industrial subsidies, SOEs, and countervailing measures
- offering cooperation to the US on the issue of competitive distortions by non-market economies.

On the latter two objectives, further elaboration is needed. A reform of WTO rules—potentially in a plurilateral WTO agreement—would require China's consent. However, Beijing's cooperation appears highly unlikely under current circumstances. If this continues to be the case and presuming a scenario in which the negative spillovers from China' state capitalism on the world market continue to increase PTPL could be developed into an alternative to the WTO. This ultima-ratio backdoor of PTPL would thus serve as an incentive for China to cooperate on reforming WTO rules. Otherwise, without such a mechanism and in such a scenario, the WTO crisis would be likely to deepen even further, as more and more countries would tend to use trade-defence measures that go beyond WTO rules, like the United States (probably) did under Donald Trump. Thus, it might be necessary to put the WTO at stake in order to save it.

Creating PTPL would by no means be a panacea. One issue would be the different trade-policy approaches of the EU and the US in their FTAs (for instance, in terms of sustainability standards). However, the EU and the US clearly have common strategic interests in reforming the WTO, reining in the global spillovers from China's state capitalism, and, more generally, in building a broad coalition of like-minded countries. In view of the geopolitical tensions between China and the US, the strategic value of PTPL could make it worthwhile for the EU and US to join hands in this respect and to strive for compromises.

For the EU, Brussels would have to allow certain changes in its trade-policy approach. However, the EU could pay tribute to its objective of strategic autonomy because it would be one of the drivers of a coalition of like-minded market economies alongside the US. Moreover, it could position itself as a trade-policy

actor that provides an answer to one of the most burning issues of the global trade order—the distortions of competition by large non-market economies that jeopardise the WTO.

Jürgen MATTHES heads the research unit for international economics and economic outlook at the German Economic Institute (Institut der deutschen Wirtschaft [IW]), the largest privately financed economic think tank in Germany. Before taking this position in 2015, he held several positions in the IW, which he joined in 1995. His economic studies were undertaken in Dortmund and Dublin (1988–1995). Matthes has published on a wide range of topics covering trade policy, globalisation, China, global value chains, EU and Economic and Monetary Union (EMU), structural economic change, and the competitiveness of nations.

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Asian-European Supply Chain Risks

Hubertus BARDT

Abstract

Asia is the most important source of imports for Europe. Therefore, the presence of stable and sustainable supply chains are of particular relevance to the European economies. There are, however, currently certain risks to the security of this supply chain. Some must be mitigated at the company level; others can only be addressed by governments in bilateral or multilateral approaches to strengthen global economic exchange and ensure the security of supply. One way to reduce vulnerability would be simply to do away with the dependency by reshoring supply chains. However, such an approach would risk the level of prosperity created by globalisation.

Asian-European Value Chains

Asia's large population, coupled with its industrialisation processes, has made the region into the workshop of the world. Its economic development has been much more dynamic than that of other developing regions, and its growing wealth has then naturally led to additional export opportunities. It has become an incredibly important partner for European economies. Foreign direct investment (FDI) and trade relations form the fundamentals of economic cooperation between both continents. Asia has become the most important source of imports for Europe. Many European industrial value chains are based on the division of labour with Asian companies. Natural resources are mined and processed in Asia; basic materials are produced and consumed in Asia; while labour-intensive and high-technology products are exported to Europe. According to Eurostat, in 2019, 45% of all extra-EU imports to the European Union came from Asia, having grown from 38.7% in 2002. As globalisation progresses, the economies of both continents are becoming increasingly intertwined. Value chains have been integrated, with Asian companies exporting both final and intermediate products, as well as natural resources, to Europe. Ensuring reliability of supply is crucial for the stability and economic success of these international value chains. This has been seen particularly clearly during the COVID crisis—the ensuing disruption of

global supply chains has demonstrated how vulnerable industries can be once their supply of components is compromised. More critically, the public health of societies was challenged when health goods could not be delivered after the outbreak of the pandemic. As a consequence, the stability and resilience of supply chains is being widely discussed, to the point of some even questioning the benefits of economic globalisation and free trade. Others point out that the pandemic only highlighted the importance of secure global sourcing, as this was how many necessary supplies were procured during the COVID crisis (Kober et al., 2020).

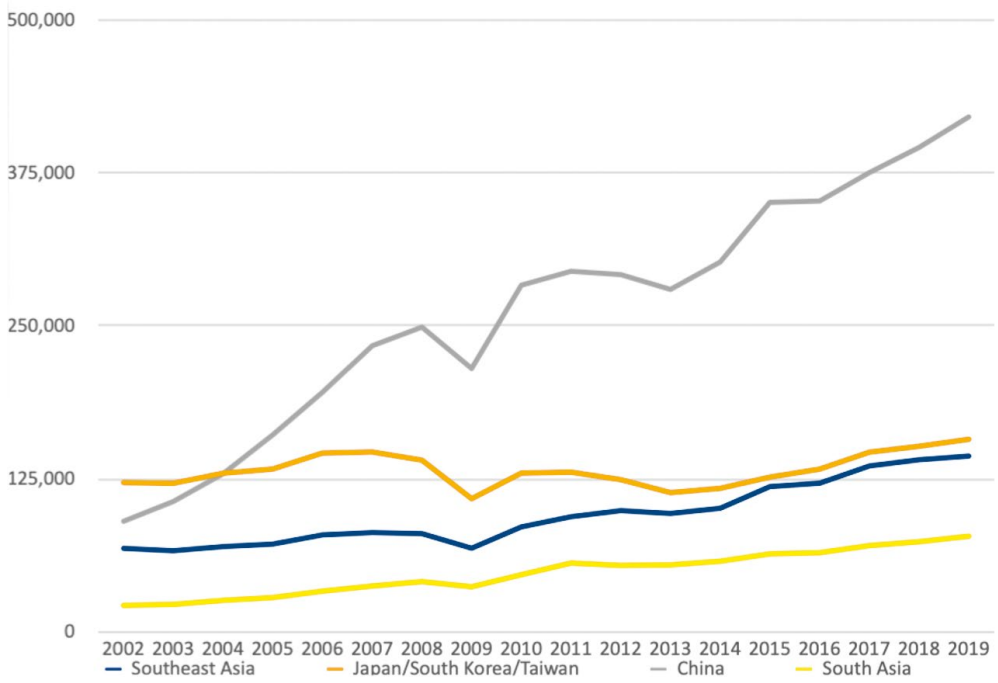
It is important to note that the relative increase in Asia's share of imports was caused by the economic growth of one country that has changed the global economy—China. China was responsible for just shy of 10% of extra-EU imports in 2002, a share which has risen to 20% in 2015, and almost 21% in 2019. Combined, the countries from South Asia, Southeast Asia, China, and the East Asian industrialised economies of Japan, South Korea, and Taiwan are responsible for 32% of extra-EU imports, rising from 25% in 2002.

The economies of the selected regions and countries have very different characteristics. Japan, South Korea, and Taiwan are innovative, industrialised countries that resemble European economic standards. Trade between Europe and these East Asian countries is well-established, and counts as trade between industries at the same level of development. Meanwhile, Southeast Asia is increasing its trading share, and becoming a growing supplier of intermediate and consumer goods. South Asia, although it contains two of the largest countries in the world, India and Bangladesh, is still lagging behind. China—with its exceptional development, impressive growth rates and integration into global value chains—is a category of its own. Although its exports to the EU were a quarter smaller than those of the three East Asian industrialised economies in 2002, they are now twice as high as the exports of all other countries of the selected group. China has increased its share of imports from Asia (including Turkey and the Middle East) to the EU from 25 to 45% and is thus the dominant player in Asian-European value chains.

Comparing the absolute values of extra-EU imports from Asia, significant differences can be seen (Figure 1). While the trade value of imports from the industrialised countries of East Asia to the EU has remained fairly stable since 2002 (only +26% by 2019), there has been constant growth in the imports from Southeast Asia (+111%), and an even higher increase in those from South Asia at a much smaller absolute level (+261%). China, meanwhile, increased its import trade flows to the EU from 90 to 420 billion euros (+366%) and, in 2005, overtook

the three industrialised East Asian countries—Japan, South Korea, and Taiwan. EU member states now import more products from China than from all the other countries in the selected group.

Figure 1. European imports from Asia—Extra EU imports to the EU-28 (in million euro)



Southeast Asia: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, Vietnam

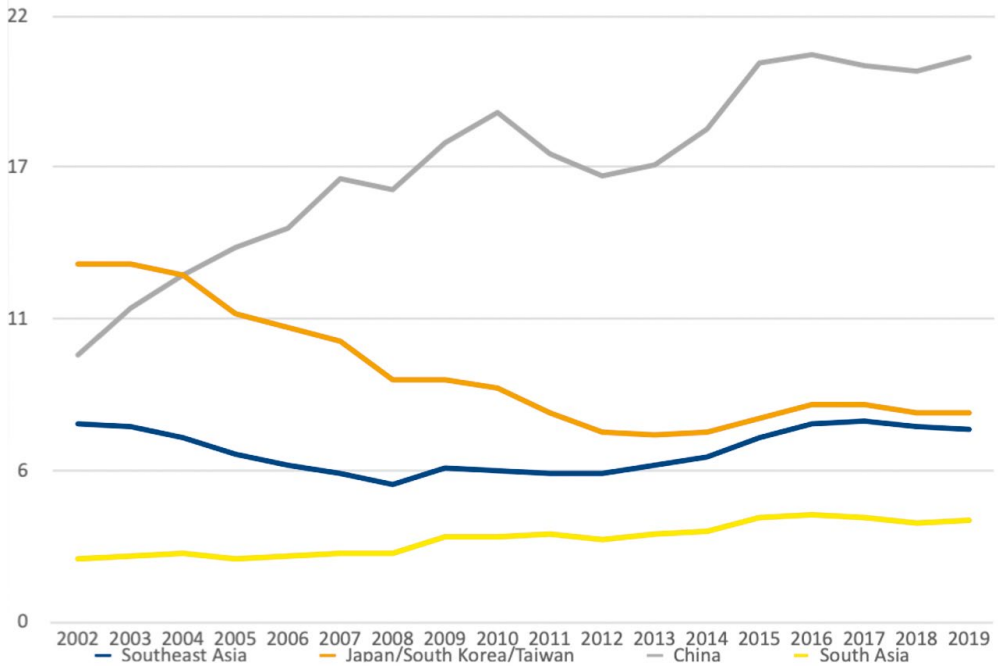
South Asia: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka

Source: Eurostat, IW

China is not only the most important supplier from Asia, but it also has a high share of total extra-EU imports to Europe (Figure 2). The incredible growth of this economy, after its reintegration into the world market and into global supply chains, is also reflected in international trade flows. China has doubled its share of EU imports from less than 10%, to more than 20% between 2002 and 2015, and has remained stable since then. In the same time period, the share of the three East Asian industrialised countries shrank from 13 to 8%. South Asia maintained a steady increase from 2 to 4%, while the Southeast Asian countries lost market share from 7 to 5% between 2002 and 2008, but returned to their previous level in 2016. The last years have proven remarkably stable; the selected countries'

and regions' share of the European market only changed marginally prior to the COVID crisis.

Figure 2. Shares of imports to Europe (as a percentage of total extra-EU imports to EU-28)



Southeast Asia: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor-Leste, Vietnam

South Asia: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka

Source: Eurostat, IW

Multiple Supply Chain Risks

The COVID crisis has stressed international value chains. In early 2020, many companies feared that supply chains from China would break down and, therefore, that necessary goods would not be available on short notice. This was a critical threat when it came to securing the supply of medical products to protect against infection. However, it naturally also affected the supply of consumer goods and intermediate products. Nonetheless, after the initial supply-side shock, global value chains have proven to be remarkably stable. While deliveries within Europe from its own neighbours became increasingly problematic as borders closed across the continent, and the pandemic forced European societies and

economies into strict lockdowns, the situation in China and other Asian countries was already improving.

A year after the initial COVID shock, multiple new supply-chain problems emerged—steel was partially unavailable, semiconductors became a major bottleneck for the automotive industry, and shipping capacities were challenged by scarcity and high prices. However, all these phenomena are not caused by additional negative-shock events but reflect the developments from the beginning of 2020. The expectations of a long-lasting economic crisis had led steelmakers to reduce their capacities. As restarting production for the many different products on the market takes months, it was not surprising that production levels would struggle to meet the high demand in the face of strong economic recovery. The situation was similar for manufacturers of semiconductors, as automotive customers cancelled orders and production capacities were shifted to other consumers. Shipping logistics faced a sharp decline in the spring of 2020, but a huge additional demand to replace the cancelled deliveries subsequently led to unusual peaks in shipping demand. In other words, the prolonged stress within international value chains is a dual result of the COVID shock, and the surprisingly quick recovery.

The COVID crisis has drawn new attention to supply risks within global value chains. However, managing supply risks has always been an important task for the procurement of internationally active companies (vbw, 2021). International supply chains are associated not only with wealth-creating effects due to division of labour, but also with additional risks, as compared to fully integrated production. COVID has increased the perception of risks and put the debate on the stabilisation of international supply chains on the political agenda.

Supply-chain risks faced by companies can be economic, technical, or legal in nature. They include, inter alia, price fluctuations, financial-market shifts, macroeconomic events, increased competition, lack of solvency, or disputes between trading partners. Some risks are more difficult for companies to comprehend and manage. For instance, external shocks, lack of competition, and policy-related risks are challenges that may require more political attention. Some risks can have consequences for entire economies or societies and therefore need to be assessed politically, not only by the companies directly involved in organising the value chains. The risks outlined below are not specific to trade and cooperation between Asia and Europe but form universal risk categories which also apply to these value chains.

- *International shipping risks*. Most of the trade between Asia and Europe is shipped by large cargo vessels. Some shipping routes are threatened by military conflicts or piracy. In other cases, lacking infrastructure, closed ports, or missing capacities can harm supply chains, as important raw materials or intermediate product deliveries can be postponed or cancelled. Free-trade routes are an important precondition for international economic cooperation, which can only be guaranteed by governments. While a lack of capacity or price fluctuations are typical entrepreneurial risks, the current situation with missing shipping capacities after the COVID shock is a rebalancing process after an unexpected global economic shock.

- *Lack of competition.* Market economies are based on competition between companies on markets. Lack of competition is a major reason for inefficiencies, and for lack of innovation. In cases where there is a monopoly, high prices (monopoly rents) can be charged, as consumers have no freedom to choose from other suppliers. Moreover, dependence on a single supplier increases the risks in the value chain, as the reliance on the monopolistic supplier can be abused. Additionally, should the sole company be unable to produce and deliver its products for any reason, there are no short term replacements, as completely new supply structures would have to be established.

- *Natural resource monopolies.* A monopolistic position in natural-resource markets poses additional risks. Unlike a monopoly of industrial goods, natural-resource deposits cannot be duplicated. The main country this currently relates to is China. While most virtual monopolistic positions held by China could be contested, this would be extremely expensive. Mining and processing of rare earths or other high-tech minerals is not geologically limited to China, but the investments and operating costs that would be needed to reduce dependency are high, and the process would take years to establish. Hence, there are no alternatives even in the medium term. Additional extraction and production capacities can be developed in Africa, although China has already established a strong position in these countries as well.

- *Short term inflexibility.* Another potential risk is when supply chains need to shift on short notice and there are no available options allowing for that adaptability. In such situations, any disruption, regardless of size, cannot be adequately compensated for. Instances where short term reactions on a large scale were necessary include the post-tsunami situation in Japan in 2011, or during the COVID crisis in 2020. Inflexibilities create dependencies, which can prove to be an expensive risk in case of disruptions to existing supply chains.

- *Trade distortions.* Subsidies, protected over-capacities, or state-owned enterprises have the potential to distort competition in markets, and thus also affect trade. Competing against companies that enjoy such privileges is a politically generated market risk. As privileges can increase in magnitude or relevance in unexpected situations, they constitute not only a systematic disadvantage, but also a constant risk in supply chains.

- *Political interference.* Government interference in market processes for political reasons adds further risks to markets, and reduces the efficiency of market-price-based coordination. Countries with a high tendency to exert political influence on markets create risks for the supply chain, as interference can disrupt existing cooperation.

- *Politicisation.* An extreme form of interference is the use or abuse of market position for political reasons. This is the case if monopolies take given actions with political, rather than business, intent. It is also the case if countries use state dependencies, or trade relations as political instruments. This can take the form of sanctions, or boycotts of certain countries to increase pressure, such as China stopping exports of rare earths to Japan to increase pressure in a geopolitical conflict.

- *Protectionism.* The increase of tariffs and non-tariff trade barriers, especially in the case of escalating trade conflicts, poses a severe threat to global trade, and therefore to the stability of international supply chains. Increased prices, or other import restrictions, lead directly or indirectly, to shifts in trading patterns, which in turn, may cause supply risks. One widely discussed source of protectionism was the previous US administration, but the tendency of growing trade restrictions and barriers is a global problem involving many players.

- *Military conflicts.* Military conflicts can cause a hard cut in existing supply chains. Although these are not common in many parts of Asia, there are territorial conflicts, especially between China and its neighbours. Taiwan, in particular, is threatened by China's rejection of Taiwanese independence. An escalating conflict could immediately stop European trade with both countries, and thereby destroy much of the supply chains between Asia and Europe.

- *Climate risks.* Climate change is probably the most discussed long term global development that affects all kinds of economic activities, and therefore carries substantial economic risks. These risks can materialise directly, in the shape of threats from changing climate conditions themselves. Events like

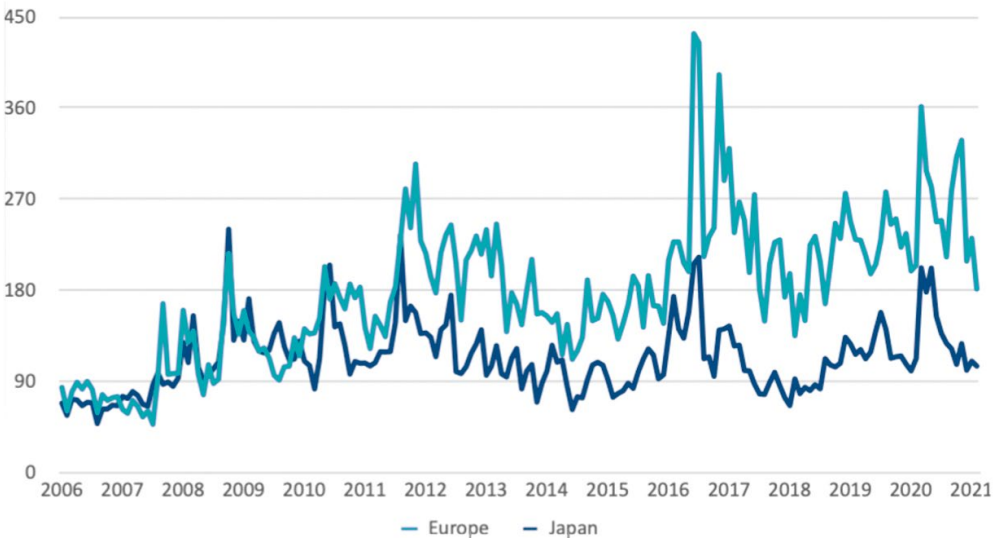
droughts, flooding, storms, or heatwaves can limit production and disrupt transport lines, and therefore threaten established supply chains. These risks can also materialise indirectly, through climate protection policies, such as emissions-reduction measures, or reduction of domestic carbon-intensive production. For instance, European measures to restrict imports of carbon-intensive products, or to increase their prices, may pose a threat for existing supply structures. Additional costs may be imposed, which can reduce competitiveness and lead to a shift in supply chains from Asian partners to other countries (for instance, on the African continent).

- *Health risks.* The COVID pandemic has reminded us of a risk that had been almost neglected until now. Health problems become economic risks when production must be reduced, transport becomes more difficult, travel is restricted, and borders are closed. In a pandemic situation, alternative sourcing options are not a solution if all sources are similarly affected. In such a case, even regional production may not be helpful. Indeed, in the first wave of the COVID crisis in Europe, closed borders obstructed European supply chains more severely than their flow of imports from Asia.

- *Sustainability risks.* Western societies are increasingly concerned about the social and environmental impacts of their consumption and production. Therefore, sustainability within supply chains has become a political issue, and many companies feel under pressure to act accordingly. A lack of compliance with social or environmental standards could jeopardise existing supply structures in the short term, as consumers or public opinion could force companies to immediately reorganise their supply.

The last years have been characterised by growing political conflicts, which have led to increased uncertainty about political developments. Events such as the Brexit decision or the election of Donald Trump as president of the United States have resulted in new highs of uncertainty for the future of globalised supply chains. Political decisions and their consequences for economic development, and for the stability of supply chains, have become even more difficult for companies to calculate. However, these risks seem, currently, to affect the EU more than other players. For instance, both the EU and Japan experienced peaks of uncertainty following specific political events, such as Brexit, and the election of ex-president Trump, or following disasters, such as the fully developed global outbreak of the COVID pandemic. However, in the medium term, Europe developed a trend of growing policy uncertainty, while the general level in Japan has remained relatively stable (Figure 3). Although the international comparison of these indicators is limited, politically generated risks may be more problematic in the EU than in Japan.

Figure 3. High level of political uncertainty in Japan and Europe—Policy Uncertainty Index 2006–2021

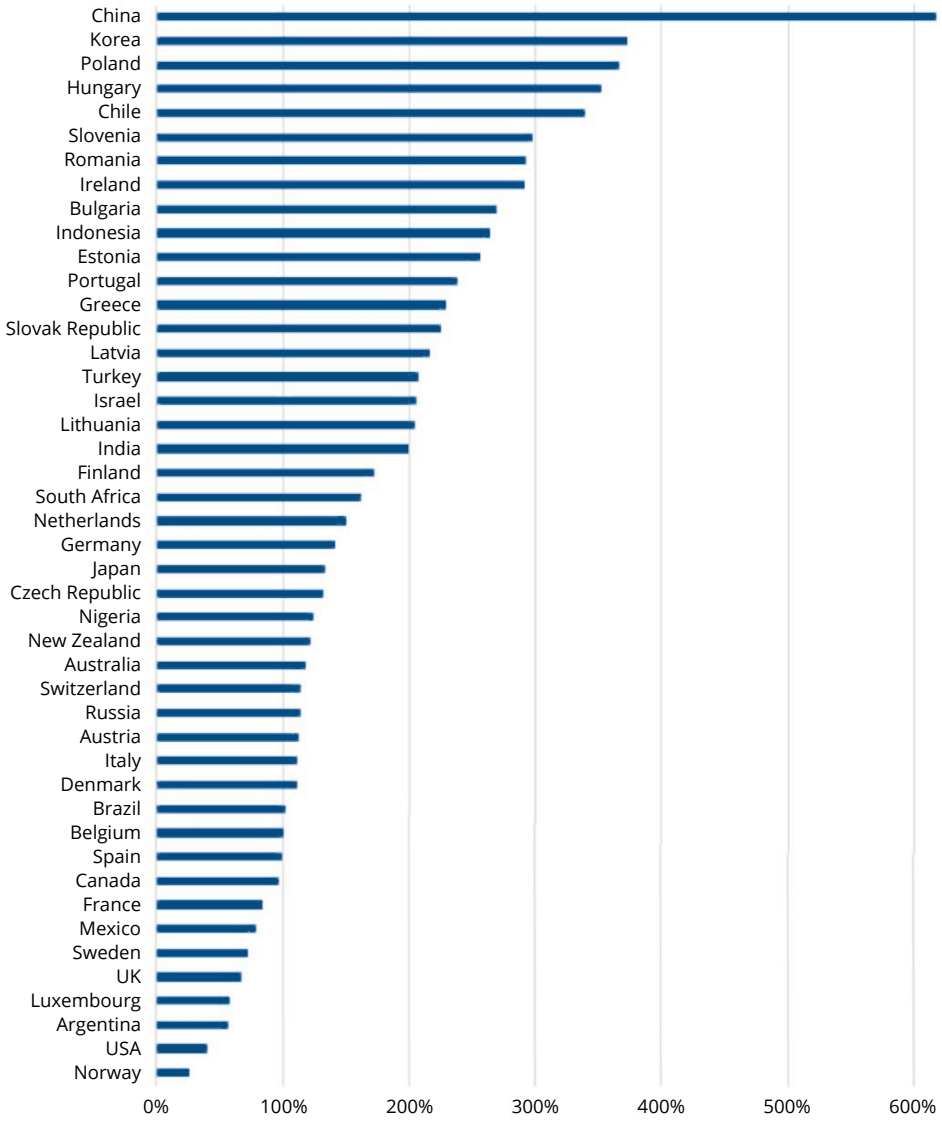


Source: 'Policy Uncertainty in Japan' by Elif C. Arbatli, Steven J. Davis, Arata Ito, Naoko Miake, and Ikuo Saito and 'Measuring Economic Policy Uncertainty' by Scott R. Baker, Nicholas Bloom, and Steven J. Davis at www.PolicyUncertainty.com

Risk Mitigation in a Globalised Economy

One political reaction to growing risks in supply chains is to question the international division of labour that has developed over the last decades. Complex value chains that include companies with different competencies from various countries have led to additional wealth being created in many countries around the world. Although large, wealthy, and industrialised countries, such as Japan, the US, and Germany are among the greatest beneficiaries of globalisation, the strongest growth effect has been observed in emerging markets, such as China, Poland, and Hungary (Figure 4).

Figure 4. Globalisation has led to prosperity—Cumulative income gains per capita in relation to GDP per capita in 1990



Source: Bertelsmann-Stiftung

In these countries, the cumulative gross domestic product (GDP) per capita enabled by globalisation is more than six times higher than the GDP per capita in 1990. In other words, China has seen a sixfold increase and Poland and Hungary a three- to fourfold increase compared to 1990, while Germany has grown about

1.5 times and the US by 40% (Petersen et al., 2020). The *global convergence effect*, wherein poorer countries grow faster than richer ones, also explains the lower relative impact of globalisation on the most advanced countries. They have already been integrated into global value chains, while the developing and emerging countries still needed to catch up.

Globalisation has recently been greatly questioned. Negotiations about multinational trade agreements on the World Trade Organization (WTO) level have not been successful; bilateral agreements have been the only way forward. The dispute-settlement mechanism of the WTO has been weakened, and trade distortions have been growing. Trade conflicts and growing tensions between the US and China have been an additional threat to free trade. The setback of globalisation is also demonstrated by the fact that international trade is growing more slowly than global GDP.

In addition to these trends, the benefits of globalisation are at least partly at stake if growing international supply risks (or the perception of such risks) lead to massive reshoring of production. The aim must therefore be to ensure supply chain security without significantly reducing the benefits of international division of labour and global competition. This is a crucial precondition for future prosperity. For example, many German companies have successfully specialised in a small niche, but their business model depends on access to this niche on a global scale. Otherwise, the market potential would be too small to enable this specialisation and technological progress. Restricting access to global markets would therefore limit opportunities to develop specialised competencies and reduce the innovation potential of the global economy. Furthermore, additional obstacles to global economic integration would reduce competition and therefore constitute an additional threat to future global prosperity.

However, additional supply-chain security will not come without cost. For instance, it can be expensive to integrate additional suppliers into a given supply chain, as additional coordination efforts and reduced economies of scale have to be taken into account. It is, naturally, the businesses that are part of the affected value chains which must balance adaptation costs against supply chain risks. Supplier diversification, long term contracts, equity investments, stockpiling, or other instruments can be used at the company level to balance potential damages and costs of risk reduction. Businesses are, of course, most effective in taking up their primary role in this matter when market-economy rules apply, and in countries with similar standards. In this manner, risks in supply chains between developed, industrialised countries in Asia, such as Japan, South Korea, and Taiwan, can be managed by the companies involved.

In low- and middle-income emerging economies, different standards regarding social and environmental impacts of production create growing supply-chain risks, as European companies must pay increasing attention to the sustainability of their value chains (Kolev & Neligan, 2021). This will lead to additional pressure not only on suppliers, but also on governments, both to monitor and increase existing standards. However, these economies need to preserve their competitive advantages, which typically consist of low production costs based mostly in low labour costs. Economic growth lifts people out of poverty and—over the years—increases wage levels as soon as other competitive advantages can be developed. The other important challenge for emerging countries in Asia is that diversification of value chains can result in some Asian suppliers being replaced by new suppliers from other regions, such as Eastern Europe or Africa.

Although pressure is high—and some companies will decide to invest in local sourcing, diversification of suppliers, or more stockpiling—a fundamental restructuring of global supply chains does not seem to be very probable. Companies rely on qualified suppliers that cannot be replaced easily. Furthermore, the experience of bottlenecks related to the COVID crisis does not axiomatically point to the necessity of reshoring production. Value chains have proven to be remarkably stable even during the months when the whole industrialised world was under some form of lockdown. It is unlikely that having had more regional suppliers would have significantly reduced the existing problems. In Europe, for example, European supply chains have been more vulnerable than global ones.

Summary

From the European perspective, Asia is the most important continent regarding manufacturing sector supply chains. Asia and Europe benefited from globalisation, but these gains are at risk as international trade has lost some of its dynamism—mainly for political reasons. The COVID crisis has increased pressure to reorganise supply chains. However, some of the most challenging structural supply risks are the result of market politicisation. Non-market behaviour, unpredictable political decisions within supply chains, and the threat of political intervention can lead to short term disruption of value chains. Distortions of trade and competition put risks on the stability and efficiency of value chains. The main source of these risks is the state capitalism of China, with its massive interventions and resulting trade distortions, combined with its high share in the global economy.

In the short term, the COVID pandemic was a shock to global value chains (Bardt et al., 2021). According to empirical studies, disruptions of international supply chains may have been responsible for one-quarter of GDP losses during

the COVID crisis (Bonadio et al., 2020). Compared to the possible damage, however, global supply chains withstood the strains successfully. The worldwide restrictions could, in fact, have had far more severe consequences. Furthermore, a global shock leaves few options: diversification does not help if all countries and suppliers are affected. Even regional sourcing does not necessarily increase security of supply in times of crisis, as it reduces sourcing options. If different regions of the world are affected differently, supply from distant regions may be possible, even if production in closer countries is restricted. During the first wave of COVID in spring 2020, regional supply chains in Europe were more problematic than deliveries from Asia (Bardt & Grömling, 2020). Globalisation has increased security of supply, and has stabilised value chains and, therefore, production in European countries. Supply chain risks will always exist. However, they can and should be managed for the sake of preserving globalisation gains.

Prof. Dr. rer. pol. Hubertus BARDT is managing director and head of research at the Institut der deutschen Wirtschaft Köln (German Economic Institute) and a visiting lecturer at RFH University of Applied Sciences Cologne and Heinrich Heine University Düsseldorf. He studied economics and business administration in Marburg and Hagen and received his doctorate in economics from the Philipps University Marburg. He joined the German Economic Institute in 2000 and headed the research unit for environment, energy, and resources from 2005 to 2014.

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The Future of Europe-Asia Trade Relations after RCEP

Alessia AMIGHINI

Abstract

The European Union (EU) has growing trade relations with many Regional Comprehensive Economic Partnership (RCEP) signatories. European companies have well-established intra-Asian supply chains and can thus benefit from the harmonised rules of origin and reduced tariffs among RCEP countries. To maintain good trade relations, the EU and Asia should cooperate to define the new rules of digital trade.

After eight years of inconclusive negotiations, the Regional Comprehensive Economic Partnership (RCEP) was eventually signed among 15 countries[1] in November 2020. As global trade continued facing waves of uncertainty caused by the COVID-19 pandemic, along with continuing geopolitical tensions—not least the unresolved trade war between the United States (US) and China—the achievement of such an agreement comes as something of a surprise. Intra-Asian trade is already larger than Asia's trade with North America and the EU combined. The extended bottlenecks that troubled long-distance trade during 2020 created a big incentive for Asian countries to deepen the already existing pan-Asian trade network. The foundational belief behind such a push for greater market regional integration is that it will lead to greater economic prosperity—indeed, as the EU has shown since its inception.

RCEP creates the world's largest free-trade zone among countries, accounting for 28% of global GDP, 28% of global trade, and 29% of global population. RCEP is set to increase trade relations among its members and further promote the development of regional value chains in 'Factory Asia'. It can thus be surmised that intra-Asian trade will continue to be a growth engine for the global economy and may accelerate the eastward shift in the centre of gravity of world growth. This will likely exert a significant impact on Asian relations with the EU as well, as the two are now linked with each other by the most intense trade relations in the world.

1 The 10 members of ASEAN and Australia, China, Japan, South Korea, and New Zealand.

This chapter will first summarise and review the results of the few studies that have ventured into estimations of the results of RCEP on global trade relations, and in particular those with the EU. It will describe recent trade and investment developments involving RCEP members, with a view to estimating the likely impact of RCEP on overall trade relations with the EU. Finally, the chapter will discuss the urgent need to regulate digital trade so that it does not become a trade-diverting factor in EU-Asia trade.

RCEP Expected Impact on Trade: A Short Review

According to the results of the most comprehensive empirical study on the aggregate impact of RCEP on world trade (Petri & Plummer, 2020), RCEP strengthens East Asian interdependence, raising trade among members by 428 billion USD, and reducing trade among non-members by 48 billion USD. Using a computable general-equilibrium model, the authors show that the agreements will raise global national incomes in 2030 by an annual 186 billion USD. They will yield especially large benefits for China, Japan, and South Korea (being the only countries among RCEP members that are not yet linked by any trade agreement with one another, and therefore can reap larger benefits from the new free-trade area), with losses expected for the US and India.

As most RCEP members are already deeply connected through trade and investment, room for further regional integration may be limited. So far, the region has already become a major source market for member countries—the share of intra-regional imports (i.e. among countries within RCEP) has increased by 10 percentage points since 1990, and already accounted for 50% of total imports in 2018. Except for the country pairs Japan-China and Japan-South Korea, trade agreements for all bilateral links between RCEP countries already exist. As such, only a few additional tariff cuts are expected with the inception of RCEP.

In contrast, the role of RCEP as a sales market is more limited, as intraregional exports only accounted for 39% of total exports in 2018. RCEP is still far away from being an integrated market, equivalent to the EU, for instance, where intraregional trade is dominant compared to extra-EU trade. In 2020, according to Eurostat, most member states had a share of intra-EU exports between 50 and 75%. It was above 75% in Hungary (78%), Slovakia (79%), Czechia, and Luxembourg (both 80%).

What RCEP can change significantly is trade with and among the three largest Asian economies involved (China, Japan, and South Korea). Estimates by Petri and Plummer (2020) suggest that, by 2030, total exports to the world by China, Japan, and South Korea will be up to 248 billion USD, 128 billion USD, and 63 billion USD,

respectively. Exports by each of the three countries to the other two will increase by 96 billion USD, 193 billion USD, and 36 billion USD for China, Japan, and South Korea, respectively. Moreover, the largest reduction of trade barriers will be due to the harmonisation of the rules of origin. Given the deep production linkages within the region, the current network of bilateral treaties, each with different provisions for rules of origin, constitutes a high bureaucratic burden for firms operating in the region. Common and simplified rules of origin are designed to facilitate the integration of regional value chains, so harmonisation will be a major source of trade creation in the area.

The EU has a growing trade connection with RCEP signatories. China, Japan, and South Korea are not the only ones among the EU's top ten trading partners. In addition, the EU has signed free trade agreements (FTAs) with four RCEP signatories and is negotiating with five others. According to Eurostat 2019 trade data, in value (euro) terms, RCEP signatories globally account for one-fifth of the EU's total extra-EU exports, and 31% of the EU's total extra-EU imports. In volume terms, RCEP member states account for 12% of total extra-EU export volume (in kilograms) and 7% of total extra-EU import volume. In both imports and exports, machinery products and automotive goods are among the top five commodity categories. In 2019, these two categories accounted for 44% of the total value and 7% of the total volumes of EU exports to RCEP countries, with equivalent import figures at 53 and 18%, respectively.

It is worth remembering that while intraregional trade has been growing in RCEP countries since 1990, the relative importance of the EU-28 and North American Free Trade Agreement (NAFTA) countries as trading partners for RCEP members has sharply declined (Flach et al., 2021). Between 1990 and 2018, imports from NAFTA and the EU-28 together decreased by 17 percentage points to 22%, and exports to NAFTA and the EU-28 together decreased by 14 percentage points to 33%. The fact that much of this development took place before China's accession to the World Trade Organization (WTO) in 2001 (Flach et al., 2021) suggests that regional production networks were already growing between Northeast Asian advanced economies and Southeast Asian developing economies, partly independent from China. Now RCEP will complement this with further integration among the three manufacturing powerhouses—China, Japan, and the Republic of Korea. For example, under RCEP, China commits to eliminate tariffs on 86% of Japan's exports, including auto parts (Dadush, 2020). Together, the three nations generated 5.3 trillion USD of value-added in manufacturing in 2019, which is over 1 trillion USD more than the US and EU combined.

Besides the aggregate effects on trade flows, an interesting question is, to what extent and in which manner will RCEP impact EU-Asia trade? Although scenarios are difficult to estimate, many elements have been offered in a number of extant studies that, taken together, allow for an understanding of the most likely implications of RCEP on trade relations between the EU and Asia. As a significant share of trade is embedded in global value chains (GVCs), the latter offer a useful criterion for the assessment of the type of trade interdependencies at work between the EU and Asia, and how they could be affected by RCEP. A handy starting point is the analysis of backward and forward linkages among the three major world trading regions or blocs: Asia, Europe (taken here as predominantly the EU), and North America. These trading blocs are centred around the respective leading manufacturing powers (China, Germany, and the US), each, in turn, embedded in regional production networks with supplying countries. These blocs have also been called factories, namely, 'Factory Asia', 'Factory Europe', and 'Factory North America'. The latter two world factories both used to be deeply integrated through regional production networks or value chains back in the 1990s. Factory Asia, on the other hand, taken as a whole to include both East and South Asia, has been much less of a unanimous bloc. This can be seen from the fact that the share of value-added produced within Asia was, at the time, lower than in Europe and North America in many high-tech sectors. This has progressively changed, as a larger share of value-added production started to come from within the Asian region. Today, Asia is a highly integrated region through regional production networks. As mentioned in the World Bank's 2020 World Development Report,

> In an average European country, 65% of the imported intermediates embodied in its exports in 2018 originated from other European countries. This share is about 55% for an average East Asian economy, and almost 40% for a member country of NAFTA. The other regions are all more integrated globally than regionally. (WDR 2020, p. 25)

With further trade liberalisation and harmonisation of rules of origin within RCEP, Asia has the potential to become an even more integrated 'Factory RCEP'. This raises concerns among EU-based firms that reduced tariffs and common rules of origin in the RCEP group will lead to deeper production and trade linkages within the region—to the detriment of trade with the EU.

However, there are important differences among the three world factories. Akin to Europe and North America, RCEP is centred around China as the largest manufacturer. However, unlike Germany's and the US' share within Factory Europe and Factory North America, respectively, the share of China's value-added

traded with RCEP has decreased over time, both for backward and forward linkages (Flach et al., 2021). This means that China has decreased the value-added it imports from RCEP countries, and has increased the domestic value-added content of production and exports. Consistent with China's industrial development goals aimed at building indigenous productive capacities, the country has reduced its participation in GVCs, including within Factory RCEP. As a consequence, the latter has grown less centred on China. As such, in terms of value-added trade, RCEP is now more dependent on the other two world factories, and on Germany and the US, in particular.

These developments are consistent with the evolution of foreign direct investment (FDI) within RCEP. According to Garcia-Herrero (2021), ASEAN countries have been receiving an increasing amount of manufacturing FDI from Japan, South Korea, and Taiwan—a share which is already larger than the FDI they send to China. Such a sharp increase in investment into ASEAN is not only a response to higher labour costs in China, but is also a means of diversifying from excessively China-centric value chains. When RCEP negotiations started in 2012, it was largely to try to disentangle the 'spaghetti bowl' of complicated rules, particularly for trade in goods, across Asia. The largely export-oriented countries in Northeast Asia wanted to create a new agreement to make it easier for supply chains to operate with ASEAN (Elms, 2021).

The signing of RCEP is very significant for ASEAN because it will secure the group's centrality in East Asian economic integration. Indeed, RCEP is a mega-FTA proposed and promoted by ASEAN, not by Japan or China (Shimizu, 2021). RCEP will make it easier for Northeast Asian investments to build value chains in Southeast Asia. When considering China's ambition to increase its domestic-input content of production, this is likely to detach China from regional value chains within RCEP.

China will nonetheless remain a major sales market in Asia, and tariff reduction will boost trade, especially imports from Japan and South Korea. This is a major reason for concern in the EU, as there may be a detrimental impact on EU exports to RCEP signatory countries with which the EU has no trade agreement. The EU has important trade agreements in force with Japan, South Korea, and Vietnam; therefore, exports to these countries are unlikely to be displaced. However, most of the EU's total exports to RCEP in 2019 are not covered by trade agreements, including those to China, the EU's second largest export destination, where the applied trade-weighted tariff was 9.15% in 2017 (since reduced by about 2%). Other significant markets include Indonesia, Malaysia, and Thailand, where the EU faces high tariffs, and Australia, where the EU faces lower tariffs. Considering

that the EU's exports to China are composed mainly of machinery and other manufactures, some displacement of these on the Chinese market in favour of those from Japan and South Korea may be expected (Dadush, 2021).

Overall, it is still unclear how large the direct economic impact of RCEP on the EU will be. On the one hand, lower import prices on intermediate inputs from RCEP will benefit European consumers and firms, with some significant margins still to be gained. Moreover, increased economic activity and income within RCEP will boost demand and imports—to the benefit of partner countries, including the EU. On the other hand, the trade displacement or diversion effect will more likely act in favour of the most technologically advanced countries in RCEP—Japan and South Korea—which will gain a larger share of the Chinese market. These elements complement the conclusion of the most widely cited study on the impact of RCEP (Petri & Plummer, 2020), which indicates that the EU could be a small net gainer from RCEP, at about 0.1% of GDP by 2030. Nevertheless, whatever the net effect will be, trade relations will be significantly impacted. This is particularly true for individual sectors where Japanese and South Korean suppliers can effectively replace European suppliers, most likely in industrial machinery and automotive sectors.

Consequently, future EU trade strategy towards Asia should carefully consider the specificities of production networks in Factory RCEP. RCEP value chains are likely to increasingly withdraw from their prior China-centrism. As such, a strategic approach for the EU might be to conclude that closer ties with China might be the most beneficial option. The EU and China are both each other's largest trading partner, albeit with very different trade flows on the export and import sides. EU exports to China largely consist of intermediate high-tech inputs, whereas EU imports from China are dominated by manufactures. As the ambitious Made in China 2025 plan suggests, national industrial policies are likely to challenge EU exports to China. The expected reduction in exports to China was hoped to be compensated by improving EU-based firms' production activities in the country through FDI, but this has not proved easy. Negotiations on the Comprehensive Agreement on Investments (CAI) with China—eventually leading to an agreement signed in December 2020—have shown that the average EU stance in such deals is much more ambitious than China can accommodate. Additionally, China has confirmed that it is not willing to fully discuss market-access issues. Achieving a comprehensive FTA beyond the rather more limited sphere of investments is very unlikely, yet the alternative of limited free-trade deals is likely to face political resistance within the EU. This is because, although they would be technically feasible, such an approach would go against the ambitious spirit of the EU approach towards more comprehensive agreements.

Moreover, given China's attitude on non-trade issues, which the EU always includes in its comprehensive agreements, there is not much sense in thinking that partial progress in negotiations—be it on trade or investment—will increase the likelihood of such a deal being signed.

An effective policy option for the EU today would be to accelerate comprehensive bilateral agreements with other countries in Asia, such as Indonesia, Malaysia, the Philippines, and Thailand, with whom negotiations have already started in the recent past. This would increase the likelihood of benefitting from the efficiency gains that RCEP will bring to member countries in terms of common rules and harmonisation. However, for developing Asian countries now signatories of RCEP, non-trade issues are also likely to be a stumbling block, given the environmental and labour standards always included in negotiations involving the EU and other advanced countries.

Joining the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), regarding which the United Kingdom (UK) has also already expressed interest, might be a worthwhile option for the EU, maybe more so on a geopolitical level than on an economic one. CPTPP already includes countries in North America and Asia, with which the EU already has trade agreements, so the benefit from further trade liberalisation might be limited. However, the sheer size of what would become a monster partnership—spanning from America to Asia to Europe—might push the US to reconsider its withdrawal from the agreement, and therefore turn CPTPP into a challenging competitor to RCEP.

Whatever the future course of US trade policies towards Asia may be, the signing of the RCEP mega-regional agreement requires a comprehensive rethink of overall EU-Asian trade strategy. This will be closely related to the EU-China strategy, which has not been reconsidered so far, despite some anticipation made by EU's foreign policy chief, Josep Borrell, back in 2021. Forging a China strategy has proved to be a difficult exercise for the EU Commission, squeezed between the pressure from Washington not to enter into any agreement whatsoever, and the more realistic and forward-looking need to remain engaged with China. This being said, the systemic rivalry between China and Western democracies is not simply an accusation from Washington, but a condition that is more and more difficult to deny, given the ambitious Chinese aim of technological independence. In view of this, before engaging in yet another summit with Beijing, the EU needs to have an internal dialogue, so as to build an independent and unified position regarding China.

When reasoning on the most effective avenues to promote EU-Asia trade relations, a few elements are worth remembering.

First, the legacy of the Trump administration in the US has shown that a confrontational approach is more likely to push other important trade partners to secure the future of their trade relations by entering into other deals, as happened with RCEP.

Second, ignoring the systemic importance of mega-regionals may be unwise, as they are the second best form of multilateral deals left in the doldrums of WTO reform. However inefficient they may be, they keep dialogue going, albeit within clubs, and create incentives for third countries to join. The concern of an even more complex 'spaghetti bowl' of agreements should not stall progress on mega-regionals, as the series of bilateral FTAs the EU has signed with a number of countries in Asia is already creating potential inconsistencies.

Third, instead of aiming to work on broad agreements with selected geographies, it may be more effective to build coalitions of countries that are willing to agree on individual sectors. One such sector is that of digital trade—indeed, the future of global trade—which, thus far, remains unregulated.

RCEP and the Future of Digital Trade

RCEP is set to be a major catalyst for post-pandemic recovery across Asia. In fact, for Asia-Pacific businesses, RCEP effectively creates an unprecedented framework for pan-Asian trade, as it covers large and growing segments of the global population, involving both emerging markets and developed economies, while also setting trade standards across the region in areas such as intellectual property and labour rights.

One of the areas where the agreement will have the most effect is likely to be e-commerce. Indeed, many of the world's largest super apps—online or mobile platforms that combine multiple services into a single app—are based in RCEP countries. Examples include Chinese platforms WeChat and Alipay, Japan's Line, South Korea's Kakao Talk, Indonesia's Gojek, and Singapore-based Grab. Spurred by the pandemic, many digital providers are looking to expand their footprint in the region by moving into new markets—a process that should be facilitated by RCEP. As a matter of fact, RCEP countries (with the exception of Cambodia, Indonesia, the Philippines, and Vietnam) are also part of the WTO's joint statement initiative (JSI) on e-commerce, which aims to negotiate a plurilateral agreement on the 'commercial aspects of e-commerce', as economic transactions increasingly take place in digital form. Leblond (2020) suggests that RCEP's Chapter 12 on e-commerce is a potential illustration of what we may expect from the JSI, because it shows what China, RCEP's dominant member state, is willing to accept in terms of e-commerce/digital trade provisions. Meanwhile,

Japan, RCEP's other key player, agreed to the digital trade provisions in the CPTPP. The CPTPP's Chapter 14 on e-commerce was driven by the US, which then used it as the template for Chapter 19 on digital trade in the Canada-United States-Mexico Agreement (CUSMA). In principle, both chapters constrain their member states' ability to restrict cross-border data flows.

However, the language of the RCEP is such that it allows member states to impose whatever domestic regulatory restrictions they wish, as long as they are applied in a nondiscriminatory manner (i.e. applied equally to domestic and foreign companies). But even with regard to no-discrimination provisions, a member state could get away with discriminating against specific foreign companies since RCEP's dispute-resolution mechanism does not apply to Chapter 12. The e-commerce issue had been regulated very differently in the TPP, and now in the new CPTPP, where instead e-commerce is also covered by a dispute-resolution mechanism.

The recent application in February 2021 by the UK to be the first new country to the join the CPTPP will expand the geographic scope of the agreement's digital trade rules, and therefore the coalition of countries interested in being involved in the related regulatory efforts. China followed suit, with an application in September 2021. As China is by far the largest market for e-commerce, and has the largest Asian companies in the digital sector, one should expect that China will aim to exert a dominant role in the regulation of cross-border e-commerce in the Asia-Pacific. Moreover, the scope for the international use of the renminbi, in particular the new digital currency e-CNY, in cross-border trade, will largely increase, especially within ASEAN. Japan, the first country to insist, some years ago, that global rules for e-commerce should be adopted, will likely resist the possibility of this ambition being lowered to the regional level, especially if China's role in their development is too great.

Meanwhile, as previously noted, EU companies with well-established intra-Asian supply chains or Asian subsidiaries can benefit from reduced costs under the harmonised rules of origin and reduced tariffs between RCEP countries. This is particularly the case for EU industries with well-established supply chains in Asia, such as the automotive, electronic machinery, and textile sectors. For example, in 2019, 69% of Adidas' suppliers were located in the Asia-Pacific region. Naturally, EU manufacturers have a higher risk of losing competitiveness in sectors with well-established intra-Asian supply chains in the RCEP market. This will most likely be the case—e-commerce will expand within RCEP countries but not between RCEP and third countries due to segmented regulatory frameworks. Therefore, in order to build strong and sound EU-Asia relations, there is an urgent need to

define the new rules of digital trade, which will become the largest segment of world trade very soon.

In spite of the interesting opportunities offered by digital trade, there are a number of unresolved issues with regard to cross-border e-commerce (i.e. electronic transactions that take place internationally) involving two or more countries. The development of the international e-commerce market has been too swift to allow for the adequate development of rules on its functioning, with countries acting in an uncoordinated manner. This situation has led to high uncertainty on how to access many important markets, and resulted in a fragmentation of trade in what is potentially one of the most global contexts.

Three major issues should be adequately addressed at the international level to avoid diplomatic frictions and to ensure fair market access conditions.

Handling of personal data

Every online transaction also involves the transfer of data that must be handled carefully, and which constitute a key asset for the companies participating in the exchange. However, there aren't clear international standards on how this data should be handled, and the sensitivities of the world's major economic powers are divergent in this regard. The EU is currently the most advanced area when it comes to personal-data protection, having launched the General Data Protection Regulation (GDPR) in 2018. The US has lower standards in a bid to prioritise the commercial interests of companies over the individual rights of users and customers. Regulation in China (which is currently the target market for e-commerce expansion) is even less transparent. However, it is important to include rules regulating data processing in the new generation of commercial agreements; otherwise, the online sale of goods and related services could be compromised. The experience of Brexit provides us with another concrete example in this regard; pending an 'adequacy' decision by Brussels, a temporary mutual recognition regime was granted by the EU to the UK (which is continuing to apply GDPR for now), thus avoiding further uncertainties and 'bottlenecks'.

Multilateral governance still ineffective

Through the agreements underpinning the WTO, which govern trade in goods (GATT), services (GATS), information technology (ITA), and intellectual property (TRIPS), it is possible to identify some shared principles underpinning e-commerce. However, issues such as the differentiation between digital goods and services, and the definition of the crossing of 'physical' borders in the case of online transactions still need to be specified. To this end, WTO negotiations

on e-commerce are underway, although it has not yet been possible to reach an agreed text.

Data localisation issue

As previously noted, RCEP's language is such that it allows member states to impose whatever national regulatory restrictions they wish, as long as these are applied in a nondiscriminatory way. Indeed, the legitimacy of any public policy that could require a firm to locate computing facilities in a member state is self-judging—i.e. anything can be deemed legitimate if a party says so. If RCEP's member states cannot resolve a dispute on their own through consultation, then it moves to the RCEP Joint Committee (ministerial level) for further discussion. However, they do not have the power to impose any decision. Moreover, unlike CPTPP, RCEP does not contain any provision regarding source code. Thus, RCEP member states are free to require such transfer or access as a condition for market access. This means RCEP members will be allowed to make market access conditional upon data transfer.

Current efforts by the international community beyond RCEP to reach a draft agreement on digital trade are more ambitious in this area and lean towards forbidding countries from linking market access to data transfer. The supposed 'willingness shared by the international community to move forward and actively engage in such a treaty', as recently suggested by Murri (2021), will be tested, however, if China declares the looser RCEP provisions as standard conditions or requirements for them to agree to any future treaty on digital trade.

Alessia AMIGHINI is the co-head of the Asia Centre and a senior associate research fellow at the Italian Institute for International Political Studies (ISPI). She is an associate professor of economics at the Department of Economic and Business Studies at the University of Piemonte Orientale in Novara, Italy. Amighini previously worked as an associate economist at the United Nations Conference on Trade and Development (UNCTAD) in Geneva, Switzerland. Alessia holds a doctor of philosophy in development economics from the University of Florence and a master's degree in economics as well as a bachelor of arts in economics from Bocconi University in Milan.

She has published in many international peer-reviewed journals such as *China Economic Review*, *World Development*, *World Economy*, *International Economics*, and *China & World Economy.* Alessia also published chapters in several books for Edward Elgar, Harvard University Press, Oxford University Press, Palgrave,

and Routledge. She has contributed to several international research projects sponsored by Central Bank of Sweden, Inter-American Development Bank, and UNU-WIDER. She edited *Xi's Policy Gambles: The Bumpy Road Ahead* (2015, with A. Berkofsky), *China Dream: Still Coming True?* (2016), *China's Belt and Road: A Game Changer?* (2017), *China: Champion of (Which) Globalisation?* (2018), and *China's Race to Global Technology Leadership* (2019), all published by ISPI.

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A Marriage of Convenience: A Critique of the EU-China Comprehensive Agreement on Investment

Chien-Huei WU

Abstract

This chapter examines the dramatic developments of the EU-China Comprehensive Agreement on Investment (CAI) and explores what brought the EU and China together, as well as what drove them apart. This essay argues that the unilateralism under the former Trump administration compelled the two sides to cooperate, but the new Biden administration has reduced the incentive for them to move forward. Domestic politics within the EU and China also play a role. The turn of Chinese economic policies from liberal to inward-looking forms the backdrop for the EU-China stalemate. Equally important is that some EU member states have expressed their discontent with the Franco-German dominance of the EU's China policy and have called for an EU summit on China policy. The suspension of the ratification process offers an opportunity for the EU to rethink its China policy, in general, and the destiny of EU-China CAI, in particular. European values or the Chinese market—the EU has to make a choice.

On 30 December 2020, the president of the European Council, Charles Michel; the president of the European Commission (the Commission), Ursula von der Leyen; the former chancellor of Germany, Angela Merkel; the president of France, Emmanuel Macron; and Chinese counterpart, President Xi Jinping, announced the conclusion of the EU-China Comprehensive Agreement on Investment (CAI) through videoconference (European Commission, 2020). The long road towards an investment agreement between the two trade powers seemed to come to an end, but this high hope was soon dampened by political incongruence between the two sides. On 22 March 2021, the vice president of the Commission and the high representative of the Union for Foreign Affairs and Security Policy (HR/VP), Josep Borrell, announced the decision of the European Union (EU) to impose sanctions against Chinese officials in Xinjiang—for the first time in thirty years

since the Tiananmen Square Massacre (EEAS, 2021).[1] This decision immediately angered China, which retaliated with sanctions against, inter alia, some members of the European Parliament (EP), the human rights subcommittee of the EP, and the Political and Security Committee of the Council of the EU (Ministry of Foreign Affairs of the PRC, 2021a). The EP then suspended its debates on the CAI, in March, and adopted a decision on 20 May 2021 to freeze the ratification process unless Chinese sanctions against the EU are lifted (European Parliament, 2021).

This dramatic turn in events over the past five months illustrates a great deal and is worth some exploration. This essay aims to examine what brought the EU and China together and what drove them apart. The basic argument is that the unilateralism under the former Trump administration compelled the two sides to cooperate, but the new Biden administration reduced the incentive for them to move forward. Domestic politics within the EU and China's changing attitude towards foreign relations also play a role. This essay begins with a brief introduction of the negotiation process of the CAI and identifies the key actors and factors that made the breakthrough possible. It then explains why the relations between the EU and China deteriorated sharply within three months and probes the future of EU-China relations, in general, and the destiny of the CAI, in particular.

What Brought the EU and China Together

An EU-China CAI is economically attractive to both parties. The EU wishes to benefit from earlier access to the Chinese investment market, preempting US enterprises. China wishes to leverage its counterparts through parallel negotiations with the EU and the US. Nonetheless, the earlier rounds of the CAI saw limited progress. Momentum was only gained with the victory of Donald Trump in the 2016 US presidential elections, with a breakthrough only recently occurring, on 30 December 2020.

In view of the trade and technological war launched by the former Trump administration, China had to diversify its market and secure critical technologies and components from other partners, including the EU. Simultaneously, Donald Trump also showed little sympathy for the EU. He praised Brexit as a smart decision (Stewart et al., 2017), demanded European allies to share the military expenses under NATO (Wadhams & Jacobs, 2019), and most recently withdrew

1 This decision was implemented by Council Decision (CFSP) 2021/481 of 22 March 2021, amending Decision (CFSP) 2020/1999 concerning restrictive measures against serious human rights violations and abuses.

around one-third of the US military force from Germany (BBC News, 2020). Thus, the Trump administration provided an impetus for the EU and China to seek closer partnership and alliance.

The EU-China CAI can be viewed as a legacy of the German presidency of the Council of the EU under the final year of Merkel's chancellorship. It can also be seen as the EU's struggle between its conventional transatlantic partnership with the US and its ambiguous new partnership with an emergent nondemocratic power, China. For China, the CAI meant it could diversify its economic engagements and markets to European countries, the importance of which was amplified by the US-China trade war (see Aaken et al., 2019). The conclusion of the CAI reflects China's anxiety in the midst of the US' economic containment. The conclusion of the Regional Comprehensive Economic Partnership (RCEP) is one illustration of this, and the EU-China CAI, another (ASEAN, 2020).

For China, the CAI is an economic instrument of the Belt element of its Belt and Road initiative (BRI) launched in 2013 (Huang, 2016). The Belt, short for 'Silk Road Economic Belt', connects China and Europe via Central Asia. This economic instrument supplements and complements the political instrument of the 16+1 format launched in 2012, where China regularly meets with Central and Eastern European countries. The 16+1 format was transformed into 17+1 when Greece joined in 2019 (Kowalski, 2017). This format is widely perceived as China's 'divide and conquer' strategy, and risks undermining the unity of the EU.

For the EU, the goals of signing an investment pact with China are twofold. From an economic perspective, while the trade relationship between the EU and China has been booming, particularly since China's accession to the World Trade Organization (WTO), the foreign direct investment (FDI) flows between the EU and China have been relatively low. In view of this, the EU hoped that the conclusion of an investment agreement with China would encourage increased bilateral FDI flows, and provide a more predictable and transparent environment for investment, both from the EU and China.

As revealed by the impact assessment conducted by the Commission regarding the conclusion of the CAI, four main objectives were pursued by the EU in its negotiations with China: (1) improving legal certainty regarding the treatment of EU investors in China; (2) improving the protection of EU investments in China; (3) reducing barriers to investing in China; and (4) increasing bilateral FDI flows (European Commission, 2013). Specifically, the EU hoped to facilitate better market access and expand the scope of the application of nondiscriminatory treatments (especially national treatment) to both pre- and post-establishment stages, in order to improve the competitiveness of European investors (e.g.

automobile, pharmaceutical, and high-tech industries). Additionally, the EU also aimed to eliminate or reduce the adverse impacts of Chinese subsidies, or similar discriminatory advantages, offered to Chinese enterprises. Providing stronger protection of intellectual property rights and prohibiting forced technology transfer were also points on the EU's negotiation agenda (European Commission, 2013). Overall, the EU's primary objective with the CAI was to maximise European enterprises' economic benefits in their dealings with China.

From a political perspective, the conclusion of the CAI demonstrates the EU's ambition to be a global economic actor. Stretching beyond the European continent and near neighbourhood to dynamic Asia has been a priority of EU external trade policies—and China undoubtedly stands out on the Asian map. Already in 2003, the EU and China established a 'comprehensive strategic partnership', and both sides held Leaders' Summits annually thereafter (Council, 2003; Mission of the PRC to the EU, 2014). Three years on from that, and the possibility of creating an EU-China bilateral investment agreement was floated in the Global Europe Strategy (Commission of the European Communities, 2006).

When the Trump administration displayed its preference for unilateralism, and its focus on fair as opposed to free trade, China seemed to be one of the few partners that the EU could cooperate with to safeguard the multilateral, free-trade order.[2] Moreover, although the EU and the US share similar values—such as democracy, the rule of law, and economic liberalisation—and are traditional allies, the EU is nonetheless an independent actor. In this capacity, it has a strong ambition to demonstrate its geopolitical and economic power in the international community, and maintain an independent foreign policy, especially as regards relations with China. Viewed through this prism, the significance of the CAI is first and foremost geopolitical (Meunier & Nicolaidis, 2019). The conclusion of the CAI can, thus, be considered as the EU's attempt to pursue a middle-of-the-road strategy between US-China rivalry (Liu, 2021).

Finally, a desire to coordinate the common foreign-investment policy of its member states is another critical factor in the EU's decision to initiate negotiations on the CAI. Since the Going Abroad Policy was adopted in 1982, China has been eager to attract more FDI flows to stimulate its domestic economic developments. In view

2 The EU's high hopes reached their peak when President Xi made a speech in Davos in 2017 calling to safeguard the system of multilateral trade. This hope was nonetheless dampened by China's constitutional amendment eliminating the term limit and thereby enabling President Xi to be reelected after 2023. Such an illiberal and authoritarian move darkened the potential political liberalisation that was thought, in the West, would naturally follow from economic integration.

of this, China signed investment agreements with several European countries, which were primarily the capital exporting countries at that time. Since then, China has concluded 28 investment pacts with almost all EU member states.

However, the level of protection granted to foreign investors and the effectiveness of the dispute-settlement mechanism differ significantly from each other, depending on the pact. The discrepancies in investment treaties between EU member states and China pose a risk to the EU's efforts to achieve further integration among its member states in the field of external economic relations. The strong investment climate between both sides, and the deficiencies of the current legal framework, impelled the EU to coordinate its member states' investment policy towards China so as to 'create a coherent legal framework for mutual investment flows' (Berger, 2014). Plus, after the Lisbon Treaty entered into force in 2009, the competence to regulate FDI and conclude investment agreements with other countries was exclusively shifted to the EU-level by member states, with a view to progressively removing restrictions on foreign investments (Woolcock, 2010).

In view of this legal competence, the Commission adopted a communication titled 'Towards a Comprehensive European International Investment Policy' in 2010. In this communication, China was identified as a potential partner with which to initiate an investment agreement negotiation (European Commission, 2010). Two years later, at the 14th EU-China Summit, China State Council Premier Wen Jiabao and president of the Commission José Manuel Barroso, reached a political agreement to express their joint desire to launch a bilateral investment agreement (Council, 2012). Consequently, Karel De Gucht, then European commissioner for trade, and Chen Deming, then China's Minister of Commerce, agreed to launch a Joint EU-China Investment Task Force to scope out the options for an EU-China investment agreement. The negotiating mandate of the EU-China investment agreement was approved by the Council of the European Union in 2013 (Council, 2013), and the first round of negotiations was initiated a year later, in Beijing (European Commission, 2016).

The first major step in the tough negotiation process, which had already gone on for two years, was achieved in 2016. The two parties agreed the scope of the future EU-China investment deal, including issues of market access, nondiscriminatory treatments, and environmental and labour-related matters (European Commission, 2021). Then, in 2018, they exchanged their first market-access offers; Premier Li Keqiang, then European Council president Donald Tusk, and then Commission president Jean-Claude Juncker agreed to accelerate the negotiation during the 20th EU-China Summit (Delegation of the EU to China,

2018). The two sides further exchanged revised market-access offers, and committed to complete the negotiation, and conclude the EU-China CAI no later than at the end of 2020, and ideally during the 21st EU-China Summit to be held in 2019 (Delegation of the EU to China, 2019). Despite the outbreak of COVID-19, the EU and China eventually concluded the negotiations for the CAI almost on the last day of 2020 (European Commission, 2020).

What Drove the EU and China Apart?

Paradoxically, the Trump administration that brought the EU and China together also drove them apart. As Donald Trump failed to secure a second term in office, the shift of US foreign policy inevitably changed the expectations and responses of third countries. The Biden administration is believed to place greater value on transatlantic partnerships and to show more sympathy for multilateralism. The Biden administration's aim to reassure its alliance, and rebuild the transatlantic partnership, is evidenced by its choice for Europe as the destination for the first overseas trip of President Biden. Before his departure, in an op-ed to the *Washington Post*, President Biden wrote,

> In this moment of global uncertainty, as the world still grapples with a once-in-a-century pandemic, this trip is about realizing America's renewed commitment to our allies and partners, and demonstrating the capacity of democracies to both meet the challenges and deter the threats of this new age. (Biden, 2021)

In addition to greater transatlanticism, the Biden administration, was also, at least initially, expected to be less hawkish on China.

During the campaign trail, Biden emphasised the importance of counteracting China's unfair trade practices by focusing on the Western alliance in multilateral fora. The EU's conclusion of the CAI with China thus clearly runs counter to Biden's foreign policy objectives. Whether the EU will be able to smoothly ratify the CAI will, therefore, largely depend on the Biden administration's China policy. Importantly, the EU chose to reach an agreement with China during the transition period of the US. Such a move may be seen as unexpectedly unfriendly to the US. In fact, Jake Sullivan, National Security Council advisor to the Biden administration tweeted that the EU should consult with its alliance before concluding the CAI (Sevastopulo et al., 2020). Clearly, the Biden administration sent a strong message to Brussels about its disappointment regarding the EU's move on the CAI, noting that this would split the alliance and undermine the effectiveness of countering China's unfair trade practices.

For China, the EU is a refuge for Chinese enterprises and exporters endangered by the US-China trade war, and an alternative when access to the US market is difficult. The victory of Joe Biden in the presidential election brought China some hope that the US-China trade war might come to an end and that US-China engagement might regain some momentum. If China believes in such trend, then the need for courting the EU is much lessened. It would spare them the unwelcome need to listen to European values, in particular, on human rights and democracy.

Further context for the EU-China stalemate is the surge in Chinese nationalism and the turn of Chinese economic policies from liberal to inward-looking. In the Xi era, Chinese economic policies have been more and more state-centred, and a large proportion of previous reform efforts has been cancelled out.[3] Moreover, the surge in Chinese nationalism has made it difficult for China to find a common ground between itself and Western countries. Notably, on 6 March 2021, in his address to the annual session of the National People's Congress and Chinese People's Political Consultative Conference National Committee, President Xi proclaimed that China can head up to the world with confidence and pride (Xi Jinping, 2021). Such tone is in sharp contrast to his predecessors and reflects a clear deviation from the longstanding Chinese foreign policy *Tao guang yang hui* (韬光养晦)—roughly translated as 'hide your strength, bide your time'—famously laid down by Deng Xiaoping. A more confident China does not necessarily lead to incongruence between the EU and China. However, the tendency to refer to Chinese characteristics and development needs—sometimes under the cover of Asian values—as a justification for China's deviation from international norms or universal values may introduce obstacles for the EU in its cooperation with China, in particular, in view of the EU's esteemed self-image of normative power (Manners, 2002).

The Future of EU-China Relations and the Destiny of the CAI

The destiny of the CAI pends on the broad context of EU-China relations, which, at this vantage point, appear challenging. Both the EU and China have imposed sanctions against each other; whether or not they will deescalate the tension will be pivotal for the ratification of the CAI. The leaders of Germany and France held a virtual summit with President Xi on July 5, 2021, and exchanged views

3 The prime examples of this trend are the guiding policies of 'common prosperity' and renationalisation. The strengthening of the supervision regulations governing the implementation of these policies can be found in recent regulatory measures on e-commerce and platform economies, such as Alibaba and Ant Group.

on a number of issues, in particular, on climate change; however, no official statement was made. It is, therefore, doubtful whether they reached any concrete consensus. Indeed, judging from the different sources reporting the summit, little progress seems to have been made. According to the Chinese Ministry of Foreign Affairs, 'France is committed to promoting cooperation with China in a practical manner, supports the conclusion of the EU-China investment agreement and the strengthening of cultural exchanges, and welcomes Chinese companies to invest in France'. (Ministry of Foreign Affairs of the PRC, 2021b) and 'Germany supports the convening of the 23rd EU-China leaders' meeting at an early date, and hopes that the EU-China investment agreement will be approved as soon as possible' (Ministry of Foreign Affairs of the PRC, 2021b).

In contrast, the French Ministry of Foreign Affairs did not mention the CAI, but focused mainly on the IUCN World Conservation Congress, COP15 in Kunming, COP26 in Glasgow, and the G20 Summit in Rome. On China, 'President Macron and Chancellor Merkel reaffirmed European expectations as regards access to the Chinese market and conditions of fair competition' (Ministry of European and Foreign Affairs, 2021). The German chancellor released a brief statement noting that Chancellor Merkel, President Macron, and President Xi exchanged views in particular on the status of relations between the EU and China. They also talked about international trade, climate protection, and biodiversity (Bundeskanzlerin, 2021). It is also reported that Macron and Merkel made 'demands concerning the fight against forced labour' and raised the thorny issue of China's Uyghur minority with President Xi (Deutsche Welle, 2021). As such, it is clear that each party had different interpretations on what the summit was about, and it is thus hard to say if they are on the same page. Additioanl evidence of this incongruence is that the annual EU-China Summit scheduled to be held in the end of 2021 was cannecled; repportedly, tit-for-tat sanctions over Xinjiang and 'dealth' of CAI rendered this Summit meanless (Lo et al., 2021).

Importantly, some EU member states have expressed their discontent about the Franco-German dominance of the EU's China policy and have called for an EU summit on China policy. The goal is to reach a common position, as opposed to having powerful countries decide for the whole bloc (Lau, 2021a). Such discontent surfaced when the EU leaders and Chinese President Xi announced the conclusion of the CAI, and has only intensified since. In view of the current atmosphere, the ratification of the CAI may meet challenges both in the EP and in the Council of the EU.

For the EU, the political wisdom of concluding and ratifying an investment agreement with China at this moment is doubtful. The EU has long conceived and

portrayed itself as a normative power, upholding democracy, human rights, and rule of law in its external relations. Meanwhile, during the past years, China has persistently violated human rights and undermined the rule of law. To reference but a few such actions, this includes 'reeducation' camps in Xinjiang, excessive violence in anti-extradition-ordinance movements in Hong Kong, the Hong Kong National Security Law, and various intimidating actions based on its *wolf warrior diplomacy*. Such measures and actions are incompatible with 'the principles which have inspired [the EU's] creation, development and enlargement, and which it seeks to advance in the wider world'.[4] In a broader context, some of the EU's allies, for example, Australia, are suffering from China's wolf warrior diplomacy, so it is questionable how the EU can defend itself against the accusation of betraying its alliance if it concludes an investment agreement with China. To conclude such an agreement at this moment solidifies the accusations of hypocrisy which are levelled against the EU (Lavenex, 2018; Hansen & Marsh, 2015). In other words, were the CAI to come into force, one might justifiably consider that human rights and the rule of law are only there for cosmetic purposes and that economic interests trump European values.

If we shift the focus from the geopolitical EU-China relationship to the pure plain of investments, there are still some outstanding issues, notably the threat Chinese capital presents to the national security of the Union. The flood of Chinese capital has put European policy circles on alert, and some investments have been blocked due to national security concerns;[5] the story of Huawei is well-known. When the current president of the Commission, Ursula von der Leyen, took office in December 2019, she placed great weight on technology sovereignty, proclaiming, 'We must have mastery and ownership of key technologies in Europe' (Leyen, 2020; see also Barker, 2020).

Indeed, even before the von der Leyen commission, export-control regimes were already being strengthened,[6] and a new investment-screening mechanism,

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4 Treaty on European Union (TEU), Article 21(1).

5 Some examples include IMST, a satellite and radar technology firm (2020); 50Hertz, a Berlin-based company running a high-voltage transmission grid in Germany (2018); and Leifeld Metal Spinning, a German mittelstand company with approximately 200 employees (2018).

6 Council Regulation (EC) No. 428/2009 of 5 May 2009, setting up a community regime for the control of exports, transfer, brokering, and transit of dual-use items, OJ L 134/1, 29 May 2009, last amended by Regulation (EU) No. 599/2014.

established.[7] In view of these regulations, with or without the conclusion of the CAI, the export of military or sensitive items is subject to stringent export control, and Chinese investments in European critical technologies or infrastructure are subject to investment review with national security considerations taken into account. That said, given that the investment-screening mechanism in the EU is at its infant stage, it may turn out to be a regulatory loophole that China can exploit and benefit from.[8] Seen in this light, it is not difficult to understand why China is willing to exchange access to its own investment market for critical technologies or components in the EU.

Nevertheless, it still remains to be seen whether the US will rely on the extraterritorial application of its domestic export-control laws or exercise diplomatic pressure to its alliances to block this loophole. A test case to watch is that of Dutch company, ASML. US diplomatic pressure is being exerted to prevent them from exporting to the Chinese; this is one of the key tensions in current US-EU trade relations.[9]

Concluding Remarks

The dramatic developments in the CAI negotiations in the past few months—from sudden conclusion to unexpected suspension—are reflective of the swift-changing international climate. A key role was played by the former Trump administration that brought the EU and China together for the conclusion of the CAI and then drove them apart. Another two factors, which explain the sharp turn in EU-China relations post-conclusion of the CAI, are the increasingly inward-looking character of China's economic policies and the surge in Chinese nationalism. For China, territorial integrity and, by extension, Xinjiang is a core interest and taboo for foreign countries. When the EU touches on the Xinjiang issue, it inevitably angers China and invites retaliation. Moreover, European sanctions against Chinese officials due to human rights violations in Xinjiang recall the ghost of imperialism and trigger Chinese nationalism.

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7 Regulation (EU) 2019/452 of the European Parliament and of the Council of 19 March 2019, establishing a framework for the screening of FDI into the Union, L 79 I/1, 21 March 2019.

8 The Chinese acquisition of the German robot maker Kuka is one of the many cases that prompted the EU and Germany to realise the need for an investment-screening mechanism.

9 ASML is the dominant supplier of extreme ultraviolet lithography machines. These are critical equipment for foundry and chip-making. ASML wishes to supply Chinese semiconductor manufacturers.

The EU, meanwhile, has to defend itself against the accusation of double standards when it sanctions weak states but turns a blind eye to China. In fact, it has taken the EU three years to stand up to China. For the moment, the suspension of the ratification process offers an opportunity for the EU to rethink its China policy, in general, and the destiny of the CAI, in particular. European values or the Chinese market—the EU has to make a choice.

Chien-Huei WU is currently an associate research professor at the Institute of European and American Studies, Academia Sinica, in Taipei, Taiwan. He worked for the Ministry of Justice in Taiwan as a district attorney from 2001 to 2005, after which he undertook his PhD at the European University Institute in Florence in 2009. He published a book in the Nijhoff International Trade Law Series, entitled *WTO and the Greater China: Economic Integration and Dispute Resolution in 2012*, and his new monograph *Law and Politics on Export Restrictions: WTO and Beyond* was published by Cambridge University Press in September 2021. He is a visiting fellow/professor and lecturer at various academic institutions, such as the Max Planck Institute for Comparative Public Law and International Law, the World Trade Institute, the University of Bern, the University of Cologne, the University of Passau, and Georgetown University, among others. In 2014, he was awarded the Ta-You Wu Memorial Award, an award set up by the Taiwanese Ministry of Science and Technology. His research interests cover EU external relations law and international economic law.

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EU-Asia Relations Post-COVID-19: Green Recovery, Value Chains, and Sustainable Trade

Gauri KHANDEKAR

Abstract

The COVID-19 global pandemic has not only substantially transformed global value chains in a very short time, albeit temporarily, but also led to a serious rethink of domestic industrial structures, international trade, and value chains. In the European Union (EU), there is recognition of the rigidity of the region's industry and the large dependence on international value chains, which left it vulnerable to shortages of basic materials. Asia, on the other hand, has been quick to capitalise on existing flexible value chains and reorganise in response to growing demand. These changes are likely to become more permanent as nations seek to restructure their most sensitive sectors, which have been brought under the spotlight, such as health, and the basic materials industry, among others. Both continents have also been differently impacted by the economic slowdown and have set up diverse approaches to recovery. The EU, for instance, has sought to pursue a recovery which underpins its goal of economy-wide decarbonisation by 2050 through its 'Green Deal'. This chapter explores the impact of COVID-19 on Asia-EU relations and assesses expected transformations in global value chains (GVCs), industrial transition, and recent EU initiatives, such as the EU Carbon Border Adjustment Mechanism.

Introduction

The COVID-19 crisis, which began in 2020, brought social and economic life to a standstill across the globe. The pandemic not only substantially transformed global value chains in a very short time, but also led to a serious rethink of domestic industrial structures, and international trade and value chains. In Europe, it put up a fresh challenge to the general relevance of the European Union (EU) with regard to its capacity to deal with such a crisis. EU member states initially grappled with individual coping measures and containment strategies, including bolting national borders within an area of free movement (Schengen). At the start of the crisis, the coordinated EU response was weak, if not missing

entirely. Asia, on the other hand, was quick to capitalise on existing flexible value chains and to reorganise in response to growing demand in 2020. However, the delta variant of the virus brought fresh challenges in 2021, stalling recovery.

These two continents have been differently impacted by the economic slowdown, and have set up diverse approaches to recovery. In the EU, the biggest challenge was how to swiftly revive its manufacturing and industrial sector. This was necessary given the heavy reliance on Asian, and in particular, Chinese imports, which could no longer be delivered. The EU subsequently sought to pursue a long term recovery and strategic autonomy, which underpins its goal of economy-wide decarbonisation by 2050 through its 'Green Deal'—an estimated multi-trillion euro initiative set up to ensure a sustainable transition to carbon neutrality by 2050. The Green Deal can also be a channel to revitalise the EU's dwindling manufacturing sector, which as the crisis has revealed, is highly strategic to European interests. In addition, the EU also created a EUR 750 billion COVID-19 long term recovery fund: coupled with EU's long term budget, this will total EUR 2.018 trillion and is the largest EU stimulus package ever financed (European Commission, n.d.-a).

The Asia Pacific struggled hard with the delta variant resulting in a stalled economic recovery following its initial early rebound (Leussink & Dogra, 2021). By mid-2021, the region lagged behind an otherwise strong but fragile global recovery. This is mainly due to a slower rate of vaccination than the West, which in turn led to new pandemic restrictions. Some Asian countries thus had to further restrain manufacturing, while the exports that powered the recovery in China seem to be slowing. Official Chinese manufacturing purchasing-managers' indexes fell to their lowest levels in over a year in July (Yifan Xie & Emont, 2021). Manufacturing powerhouses India, Indonesia and Malaysia, have been among the worst affected. The region is nonetheless still expected to make a strong recovery in the longer term according to the Manilla-based Asian Development Bank, which forecasts developing Asia (consisting of 45 countries in the Asia Pacific) to grow 7.3% in 2021 (5.3% in 2022), and China and India to grow 8.1% and 11% in 2021, respectively (Lema, 2021).

In the immediate term, the region is likely to focus on the following key areas: vaccine deployment; reviving certain sectors of the regional economy, such as better coordination of fiscal and monetary policies, and expanding green infrastructure; and building on their close integration into global value chains (Kwakwa, 2021). Some countries in the Asia Pacific have committed to stronger climate action (notably China, South Korea and Japan, which have pledged to be climate neutral by 2060, 2050 and 2050, respectively). Although this will have an

impact on growth and economy, it has not been prioritised to the same extent as in the EU's approach to recovery.

The impact on global value chains since the outbreak of the COVID-19 crisis has led to changes that are likely to become longer-lasting, or indeed permanent, as nations seek to restructure their most sensitive sectors, which have been brought under the spotlight. These include health, and the basic materials industry, among others. The pandemic has thrown the north-south divide into relief—notably in terms of vaccine access. This will have an effect on the pandemic's progression, but also on foreign policy. This chapter will focus on the impact of COVID-19 on Asia-EU relations and assess expected transformations in global value chains (GVCs). In this context, recent EU initiatives such as the EU Green Deal (including possible Carbon Border Adjustment mechanisms) will be explored.

Transformations in Global Value Chains (GVCs)

The COVID-19 crisis brought industries, indeed entire economies, to a halt. International trade routes were disrupted, GVCs were obstructed, markets contracted, and delays and costs increased. This section will seek to assess the transformations in complex GVCs with a focus on the EU's industry set in the framework of the transition to net-zero greenhouse gas (GHG) emissions by 2050.

The pandemic highlighted the interconnectedness of countries via GVCs. Acute shortages of medical and other essential goods raised questions about globalisation, and its associated risks and instability. The very first lockdown in China created severe trade disruptions around the world, given the importance of China as a hub in GVCs. While the shortages were as much a supply side problem as an unprecedented demand side shock, the high centrality of China in GVC networks, due to comparative advantages and specialisation, exponentially magnified the issue (OECD, 2021). GVCs are highly entrenched, and it is difficult to swiftly reorganise industries. For instance, even amidst shortages, in 2020, Chinese exports of COVID-19 critical medical supplies tripled from USD 38 billion in 2019 to USD 105 billion, according to the World Trade Organization (WTO) (WTO, 2020). This issue has led many policymakers and analysts to favour a reorganisation of value chains that limits import dependence, especially of essential goods. The idea being to shorten value chains and thereby increase resilience. Many in the West are thus implicitly, and at times explicitly, calling for re-shoring—namely, a return to industrialised countries of manufacturing activity and jobs which were previously offshored to the developing world.

At the start of the COVID-19 crisis in Europe, essential supplies in particular ran low, exacerbated by the shift of manufacturing to China over decades. This made it starkly clear how important basic materials industries are to national and indeed EU interests. This relates to industries such as steel, cement, chemicals, glass and non-ferrous production, which link to every possible economic sector, including to each other, and form an intricate system of value chains. In the face of shortages, a number of European industrial sectors have had to modify or change production lines to supply critical equipment (e.g. diagnostic tests, ventilators, protective masks, gloves and gowns, Intensive Care Unit medicines and equipment, and protective clothing) to patients and healthcare workers across Europe. For instance, British chemical company INEOS, drew up plans to produce 1 million bottles of hand sanitising gel per month to cover the European shortage (Express and Star, 2020). INEOS was not alone. There have been numerous other such examples.

The impact of COVID-19 on European industrial value chains must be understood within the context of the climate transition in the EU, which had commenced long before the global pandemic. Shortly prior to the outset of COVID-19, and subsequent lockdown measures in EU member states, the European Commission (EC) had released along with its signature initiative, the European Green Deal, a new industrial strategy for basic materials industries. The goal of this industrial strategy was to help shepherd the basic materials industry—long seen as hard to abate—towards the achievement of the target of carbon neutrality set by the Green Deal. Although there have been many industrial strategies released in the past, this one for the first time aimed at carbon neutrality by 2050. The strategy has been widely supported by the basic materials industry sectors—some of which have already published their own mid-century climate neutrality roadmaps. However, it has failed to challenge classic industrial value chains, which, as seen during the COVID-19 crisis, have proved highly strategic to EU interests.

Industrial transition to net-zero is not an easy task. European industry, moreover, is rather old and set in its ways as compared to those in emerging economies. For the industrial sector to transition to net-zero, it needs a significant number of things, inter alia, finance; infrastructure; brownfield conversion; electrification of industrial processes; additional renewable energy in the energy mix; adequate supply of hydrogen; CO_2 capture and storage; circular economy promotion to strengthen local value chains; the creation of robust new value chains; and regulations and standards to create new markets for low-CO_2 products (Wyns, Khandekar, & Robson, 2018). Over the course of the last three decades, EU-based industry has largely focused upon the low-hanging fruits of energy efficiency,

with a number of production plants close to the thermodynamic limits of current processes. New, innovative low-carbon technologies will be required for industry to achieve carbon neutrality. In this regard, it is crucial to help secure the necessary finance for breakthrough low-carbon technologies to overcome innovation 'valleys of death', and thus reach demonstration and commercialisation.

It is widely accepted in the EU that recovery from the COVID-19 pandemic can come about from a renewed commitment to carbon neutrality by 2050 and that the EU's Green Deal is a unique opportunity for industry to transition to a carbon-neutral EU while safeguarding competitiveness. However, the EU's industry has long lamented the possibility of 'carbon leakage', or the shift of manufacturing from the EU to countries with less stringent climate regulations. The EU's industry, with the exception of the chemicals sector, has still not recovered from the 2008 crisis (Wyns et al., 2018). Climate regulations have made EU industrial production more expensive than elsewhere. In addition, the mass export—or dumping—of cheaper third country products, such as Chinese steel, in the EU has further reduced competitiveness. Climate transition in the EU will not happen without significant protection for the EU economy, be it through international climate diplomacy, or certain trade protections. For industry, this will mean a significant impact on value chains—and will imply a shift towards shorter, more regional value chains. The EU has expressed an interest in exploring carbon border adjustment taxes (which will be further discussed later in this chapter). However, these are difficult to set up swiftly and may trigger international dispute or retaliatory measures. In the meantime, standards can also be used: EU standards often reverberate outside of EU borders given that non-EU producers are also bound to apply these so as to maintain their access to the EU internal market. With or without border carbon adjustment taxes, it is certain that the EU will not import carbon-intensive products while producing low-carbon itself. Measures are also being put in place to stimulate and protect domestic, climate-friendly production, such as the greening of the EU internal market via low-CO_2 standards on final products and green public procurement.

In the short and long term, the goal of a carbon-neutral EU by 2050 is clear. To achieve this target, the cooperation of industry will be vital. Every conceivable low-carbon technology—ranging from energy-efficient buildings, to decarbonised transport (hybrid, electric and fuel-cell vehicles); from renewable energy (solar PVs, wind turbines, thermal systems, etc.), to battery storage—relies on materials from energy-intensive industries. The EU's Green Deal provides the most clear-cut pathway to ensure industry remains in Europe while achieving carbon-neutral growth. The EU will need to maintain open and efficient trade supply chains, both within the EU and with the EU's trading partners. Nevertheless, going forward,

the bloc will likely prioritise shorter, stronger European value and supply chains, especially given the uncertainty over how long the current crisis will last, and the possibility of further disruption.

Overall, the impact of COVID-19 on GVCs will mainly be one of diversification of supply chains, depending on the sector and on the costs of value chain reorganisation. This, however, will not cause massive re-shoring for four reasons: comparative advantage and specialisation, scale economies, innovation spillovers, and a global division of labour (Bacchetta et al., 2021). The climate transition, on the other hand, is likely to play a larger role in how industries in the EU and Asia (especially those in countries that have pledged to achieve net-zero by mid-century) will be shaped.

Sustainable Trade and Carbon Border Adjustment Taxes

The EU has not only pledged to achieve carbon neutrality by 2050, but has also enshrined it in law. The EU adopted 'Regulation (EU) 2021/1119' of the European Parliament and of the Council on 30 June 2021 (EUR-LEX, 2021). This regulation, known as 'European Climate Law', establishes the framework for achieving climate neutrality by 2050, along with an intermediary target of net GHG emissions reductions of 55% by 2030, compared to 1990 levels. On 14 July 2021, the EC adopted a series of legislative proposals called 'the Fit for 55' in order to achieve the 2030 target (European Commission, n.d.-b). Within this context and the framework of the European Green Deal, the EC will propose a Carbon Border Adjustment Mechanism (CBAM) for selected sectors. The goal of this mechanism, which will become fully operational in 2026, is to reduce carbon leakage risks in a manner compatible with WTO rules. So far, the sectors covered pertain mainly to basic materials (cement, iron and steel, aluminium, and fertilisers) and electricity, both of which have high carbon emissions. The production of basic materials, such as steel, cement clinker, plastic (HVC), fertiliser (ammonia), and aluminium, contributes to 25% of global and 16% of EU emissions (Neuhoff et al., 2021). As mentioned earlier, these are also the sectors most at risk of carbon leakage and loss of competitiveness.

In the EU, basic materials are subjected to the European Emissions Trading Scheme (EU ETS), a cap-and-trade system in which a cap is set on the total amount of certain GHGs that can be emitted by the installations (reduced over time so that total emissions fall) and the trade of emissions allowances (tonnes of CO_2 emitted) as needed, albeit curbed to a limit of allowances. As explained in the section above, the basic materials sector is already subjected to climate regulations in the EU, which add to production costs, while cheaper and more

carbon-intensive imports (and at times dumping) of the same materials from third countries are not. CBAM seeks to create a level playing field.

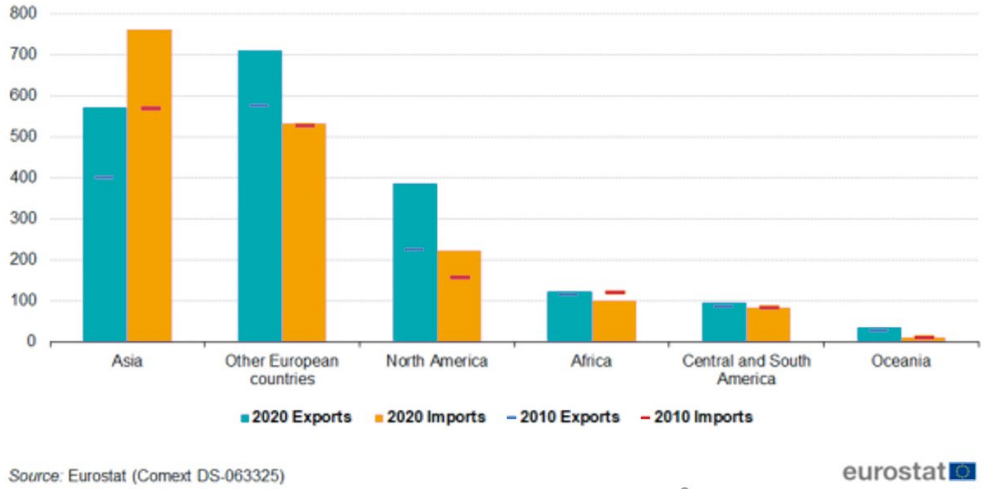
Under CBAM, EU importers will be required to buy carbon certificates corresponding to the carbon price that would have been paid had the goods been produced under the EU's carbon pricing rules. In other words, the direct carbon emissions embedded in certain carbon-intensive products will now have to be paid for, thereby reducing the likelihood of carbon leakage and encouraging producers in non-EU countries to green their production processes. The cost of the certificates will be linked to carbon prices under the EU ETS system. Revenues collected from CBAM will then contribute to the EU's budget.

Third countries have challenged the EU's proposed CBAM as a protectionist measure. However, the CBAM should generally be WTO compliant. WTO rules allow for the inclusion of environmental exemption provisions under Article 20 of the General Agreement on Tariffs and Trade (GATT) agreement (Whitmore, 2019). CBAM also respects the basic WTO principle of not favouring domestically produced goods over imports and is only applicable to those products that have not been subjected to carbon pricing regulations in the country where the goods were manufactured. Carbon pricing is not an aleatory tax—the purpose of this measure is to reduce carbon emissions and negative externalities.

The next steps will be the adoption of an intermediate target for 2040, as well as implementation measures, both by EU institutions and member states. The adoption of such new regulations in the next months and years will create additional constraints and opportunities, both on companies located in the EU, and on non-EU suppliers of goods and services intended for the EU market.

The European Single Market, the largest in the world, is well on its way to becoming a green marketplace. Sustained access to it is crucial for Asian economies. Annual EU-Asia trade, using 2018 figures, stands at EUR 1.5 trillion euros, while two way foreign direct investment (FDI) reaches EUR 90 billion (Neves, Becker & Dominguez-Torreiro, 2019). In 2020, about 44% of EU imports came from Asian countries, while 30% of EU exports went to Asia. The EU had a considerable trade deficit with Asian countries (- EUR 188 billion).

Figure 1. EU trade by geographical zone, 2010 and 2020 (EUR billion)



Going forward, the climate transition can also provide significant opportunities for enhancing trade. Already, China and India, the world's top two steel producers are exploring low-carbon steel production, which would facilitate compliance with the EU's CBAM ('China: Low-carbon steel', 2021; Daksesh, 2020). So far, there are a few such plants planned in China and India but in the near term, i.e. by 2025, only Sweden is set to produce a limited quantity of net-zero steel. Meanwhile, Indian cement production, the world's second largest after China, is already among the greenest (We Mean Business Coalition, 2020). European and Asian economies need to exploit the opportunities the low-carbon transition affords, and help each other to adapt and build greener. However, trade in low-carbon technologies, such as solar panels, batteries, windmills, and so forth, needs to be encouraged. Environmental standards must be met, as must criteria related to efficient and circular use of materials, i.e. ensuring they are created with high environmental standards in mind and can be recycled or reused. Doing so will allow for the achievement of economies of scale and further reduce the prices of such technologies globally. Between 2008 and 2012, solar panel prices have fallen by as much as 80% due to improving technology and relocating production to countries with lower labour costs (Shiphub, n.d.). Currently, the EU maintains anti-subsidy and anti-dumping duties on solar glass from China ranging from 3.2 to 17.1%, and 17.5 to 75.4%, respectively (Bellini, 2020).

Trade in hydrogen will also become important given its increasing role in decarbonisation. Currently, the lack of infrastructure means that hydrogen is not traded across borders significantly. This is an opportunity for the EU and Asia.

The EC has decided to adopt a new dedicated strategy on hydrogen, so as to create an enabling environment to scale up clean hydrogen for a climate-neutral economy; boost investments into the supply, storage, and transport of clean hydrogen; as well as support the leadership of EU industry in this field (European Commission, 2020).

A comprehensive EU approach will enable clean hydrogen to contribute to increased GHG emission savings by 2030, with a view to larger-scale deployment by 2050. Specifically, the strategy is expected to highlight the role that clean hydrogen can play in the context of the green recovery and the growth strategy that is the Green Deal, with the ambition of a climate-neutral EU by 2050. More specifically, it will identify the main barriers that currently prevent scaling up the production and use of clean hydrogen; determine a set of actions to address those barriers; foster a competitive European value chain; upscale production and use of clean hydrogen in a cost-effective way, taking into account the subsidiarity principle; and address the challenge of concomitant development of a well-functioning hydrogen market alongside a corresponding cost-efficient EU infrastructure.

Energy-intensive industries are expected to play a key role here. Unveiled as part of the EU's new industrial strategy, the EC launched, in mid-2020, an EU-wide 'hydrogen alliance' known as the European Clean Hydrogen Alliance (ECH2A). The goal of ECH2A is to promote the production of clean hydrogen in an effort to speed up the decarbonisation of industry. In addition to the EU, France, the UK, the Netherlands, and Germany also have national hydrogen strategies. The latter two in particular aim to become key import ports for hydrogen. In Asia, a number of countries (China, Japan, Australia, South Korea, India) have their own hydrogen strategies/roadmaps and have increased investments in clean hydrogen development. India launched a National Hydrogen Mission in August 2021, to turn the country into a global hub for green hydrogen production and export. To a lesser extent, South East Asian countries have also taken some initial steps to promote the development of the hydrogen industry. The EU and Asia should rapidly assess the potential and logistics for hydrogen trade, which would not only be profitable for both sides, but also, importantly, facilitate the green transition.

Finally, technology transfer is imperative in meeting the goals of the Paris Agreement. The EU and Asia could launch a platform for energy-intensive sector breakthrough low-carbon technologies (Khandekar, 2020). Such a platform could firstly help draw in finance for the sector's considerable R&D needs while opening up a vast global market for breakthrough technologies. This would, in

turn, significantly bring down technology costs. It could eventually also create large markets for low-carbon products, which would then be able to compete with incumbent products. Inter-regional promulgation of such technologies could arguably be the fastest way to create a level playing field—a major concern of European energy-intensive industries. The platform could also enable greater knowledge transfer and sharing of best practices in circularity and materials efficiency, leading to shorter GVCs. Given that most of the breakthrough low-carbon technologies in the energy-intensive sector are currently being developed in Europe, the EU could take the lead at facilitating the platform. This would accelerate the development and deployment of low-carbon technologies; create larger markets for low-carbon energy-intensive products; facilitate the creation of a global level playing; and hasten the decarbonisation of a growing sector, which would otherwise continue to account for a fifth of global emissions.

Conclusion—Key Policy Recommendations

The COVID-19 crisis will undoubtedly leave an important mark on EU-Asia relations. The climate transition will be the single largest policy priority for the EU, and CBAM can provide significant opportunities for enhancing trade and greening adaption and recovery. Meanwhile, the impetus to shorten GVCs is being felt worldwide. In view of these considerations, and drawing upon the thoughts in this chapter, the following three policy recommendations are set out with the aim of further enhancing inter-regional ties:

- Both sides must endeavour to maintain open, efficient, and shock-resilient value and supply chains. A strategy must be designed to keep trade routes open in extraordinary circumstances.
- More needs to be done to facilitate the trade of low-carbon technologies and hydrogen in particular. An inter-regional hydrogen trade strategy would be an excellent beginning.
- The EU and Asia could launch a platform for energy-intensive sector breakthrough low-carbon technologies, which would also help the EU win allies for its CBAM rollout.

Gauri KHANDEKAR is a Project Researcher in the Environment and Sustainability Cluster at the Institute for European Studies (IES). Prior to joining IES, Gauri was Deputy Director and Director Europe at the think tank Global Relations Forum in Belgium, Coordinator for the Friedrich Ebert Stiftung's Energy and Urban Transformation Projects, and Project Leader for the EU delegation to India's Think Tanks Twinning Project. Between 2010 and 2015, Gauri was Head of Asia Programme at the think tank FRIDE. In 2012, Gauri was Resident Handa Research Fellow at the Centre for Strategic and International Studies (CSIS) Pacific Forum in Honolulu, US, where she conducted research on the US' Asia rebalance policy and its implications for the EU.

Gauri has a wide range of professional experience in European and international affairs, having worked at the European Commission's DG External Relations, the European Parliament, the G20, the United Nations Headquarters in New York, a Brussels-based American consultancy (Burson Marsteller), and a Brussels-based communications enterprise (Tipik S.A.). She has also worked for three years in a development and social welfare NGO in India. In 2013, Gauri initiated a large-scale development programme in the South of Uganda.

Gauri holds two master's degrees in European studies with distinction from the Institute of Political Sciences in Lille (France) and the College of Europe in Bruges (Belgium).

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