

# PUBLICATIONS CATALOGUE 2023



Economic Research Institute  
for ASEAN and East Asia

April  
2022  
-  
March  
2023



The Economic Research Institute for ASEAN and East Asia publishes books, research reports, discussion papers, and policy briefs to share and disseminate its research findings and policy recommendations.

These publications cover a wide range of subject matter on deepening economic integration, narrowing development gaps, and sustainable development – the three pillars under which ERIA conducts research.

ERIA is also highly involved in energy-related research and this was the fourth year ERIA conducted research on healthcare, the environment, and agriculture.

ERIA actively participated in the Indonesian Presidency of the Group of Twenty (G20) throughout 2022. ERIA published numerous reports, policy briefs, and discussion papers on its implications for the economy (trade, investment, and fiscal policy), energy, and the environment. ERIA also co-published one book with Routledge and two with Springer.

ERIA also published The Comprehensive Asia Development Plan (CADP) 3.0: Towards an Integrated, Innovative, Inclusive, and Sustainable Economy, a flagship project, and Dynamism of East Asia and RCEP: The Framework for Regional Integration, which was officially launched by H.E. Hun Sen, Prime Minister of the Kingdom of Cambodia.

In fiscal year 2022, ERIA produced a total of eight books, 19 research project reports, 43 discussion papers, and 12 policy briefs.

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Books



Research Project Reports



Policy Briefs



Discussion Papers





1

ONE



PUBLICATIONS  
CATALOGUE 2023

# CONNECTIVITY

# The Comprehensive Asia Development Plan (CADP) 3.0: Towards an Integrated, Innovative, Inclusive, and Sustainable Economy

By ERIA



The coronavirus disease (COVID-19) pandemic has caused trade disruptions; a drop in foreign direct investment; and scarring effects on poverty, education, and women in many nations. However, it has also had beneficial features. Factory Asia has continued to produce and export during the pandemic, in contrast with North America and Europe. COVID-19 has boosted digitalisation, notably in information and communication technology (ICT). The adoption of ICT has boosted economic growth. Maintaining the competitiveness of international production networks and utilising digitalisation are essential to the region's future post-COVID-19.

Based on this understanding, the Economic Research Institute for ASEAN and East Asia (ERIA) has developed the Comprehensive Asia Development Plan 3.0 (CADP 3.0). Since the previous version (CADP 2.0) in 2015, nearly 7 years have passed. CADP 3.0 addresses the above-mentioned urgent concerns and discusses economic growth and social problem-solving in the region from the viewpoints of (i) integration, (ii) innovation, (iii) inclusiveness, and (iv) sustainability. CADP 3.0 comprises 18 original chapters on the four viewpoints and digitalisation.

First, CADP 3.0 claims that integration is at the core of development strategies. The Association of Southeast Asian Nations (ASEAN) and developing East Asia could use three forms of the international division of labour (the first to the third unbundlings) simultaneously. To stimulate economic growth, the region should adhere to globalisation. Second, CADP 3.0 asserts that digital technology has transformed the nature of innovation. ASEAN and East Asia must move from intensive research and development (R&D) to technology deployment. Combining incremental and disruptive innovation could revive creative manufacturing. Third, CADP 3.0 declares that inclusiveness in its three dimensions – geographical, industrial, and social – is a core value for ASEAN and East Asia. Before resorting to income/welfare redistribution, the region should employ economic forces to achieve inclusiveness wherever practicable. Last, CADP 3.0 affirms that sustainability must be realised through economic expansion and improved well-being. Decarbonisation, resource management, and disaster management are not just long-term objectives but also present challenges. The use of new technology will facilitate international cooperation in establishing a circular economy.

# Dynamism of East Asia and RCEP: The Framework for Regional Integration

Edited by Fukunari Kimura, Shujiro Urata, Shandre Thangavelu, and Dionisius A. Narjoko

Recent research conducted by the Economic Research Institute for ASEAN and East Asia (ERIA) on the Regional Comprehensive Economic Partnership (RCEP) details the structure of RCEP in terms of the complexity of its commitments, modalities, and mechanisms. It also explores RCEP's potential implications regarding the integration process in the region and how key features can strengthen domestic and regional integration. The impact of businesses, behind-the-border issues, and domestic capacities of RCEP member countries are also discussed, in addition to potential benefits of the agreement. Finally, it addresses emerging issues, especially with respect to COVID-19 pandemic recovery.

This second book, *Dynamism of East Asia and Regional Comprehensive Economic Partnership (RCEP): The Framework for Regional Integration*, addresses selected questions regarding trade in goods, trade in services, investment, and economic cooperation. Although these are more technical in nature, it is important for both the private and public sectors to understand RCEP's position vis-à-vis other agreements, including the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Chapters highlight key policy issues to increase the impact of a regional free trade agreement, such as RCEP, on domestic and regional integration..



# Regional Comprehensive Economic Partnership: Implications, Challenges, and Future Growth of East Asia and ASEAN

Edited by Fukunari Kimura, Shandre Thangavelu, and Dionisius A. Narjoko



The Regional Comprehensive Economic Partnership (RCEP) became the largest free trade agreement in the world when it was signed in 2020. It comprises the 10 Member States of the Association of Southeast Asian Nations (ASEAN) (Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam) plus five other countries in the region (Australia, China, Japan, the Republic of Korea, and New Zealand). The agreement covers a significant portion of the global economy, contributing to about 30% of global gross domestic product (GDP) in 2019.

RCEP sets an important agenda by releasing huge resources for trade and investment, and creating dynamic regional and global value chain activities. In an effort to reflect this, the Economic Research Institute for ASEAN and East Asia (ERIA) launched a research project on RCEP in 2021, dealing with the key topics covered by the agreement and identifying potential areas of reform at the country level for the RCEP member states to successfully implement the commitments of the agreement.



This is the first of three books ERIA intends to publish to disseminate its research. Regional Comprehensive Economic Partnership (RCEP): Implications, Challenges, and Future Growth of East Asia and ASEAN reports the key social, economic, and political dimensions of the RCEP framework – from the initial conceptualisation of the ASEAN+6 framework to detailed trade negotiations. The book also undertakes recursive computable general equilibrium (CGE) analysis to identify the impact of RCEP. Furthermore, it reviews the services commitments; provides a comparative analysis of RCEP with the ASEAN+1 framework and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP); considers the emergence of a regional architecture from RCEP; examines the role of RCEP in international production networks (IPNs) and the China, Japan, Korea (CJK) effects; and discusses the role of RCEP in the pandemic and post-pandemic recovery.



# Geographical Simulation Analysis for CADP 3.0

## ERIA Policy Brief 2022 No. 1

Ikumo Isono, Satoru Kumagai, and Keita Oikawa

The economic impact of the development of transport and digital infrastructure and the adoption of energy-saving technologies envisaged in the Comprehensive Asia Development Plan 3.0 (CADP 3.0) was analysed using the Institute of Developing Economies (IDE) and Economic Research Institute for ASEAN and East Asia (ERIA) geographical simulation model (IDE/ERIA-GSM). This infrastructure development and technology adoption will affect all industries and change the structure of the economy as the basis for rejuvenated and advanced industries such as agriculture, automotives, medicine, and pharmaceuticals. By combining this infrastructure development and technology adoption, the Association of Southeast Asian Nations (ASEAN) and East Asia could achieve high economic impacts and geographical inclusiveness. The Lao People's Democratic Republic will obtain the greatest economic impact as it transitions from a landlocked to a land-linked country. Cambodia will also reap significant benefits from upgrading information and communication technology. The simulation results thus recommend the implementation of the CADP 3.0 strategy for both ASEAN and individual Member States.

# Regional Integration in Indo-Pacific: Connectivity, Cooperation, and New Supply-Chain Linkages

## ERIA Research Project Report 2022 No. 19

Edited by Anita Prakash

The evolving economic architecture in the Indo-Pacific rests squarely on the post-war construct of the Asia-Pacific, which is undergoing changes in the established patterns of economic integration and supply chain linkages. The Indo-Pacific faces opportunities and challenges in the new policy alignments around trade, Global Value Chain integration, and economic cooperation. The *raison d'être* of building a new construct lies in the re-evaluation of the existing trade and investment linkages – in Asia, between Asia and the Pacific, between Asia and Europe, and between Asia and Africa – and in the re-calibration of these linkages, along with economic and technical cooperation activities, to reflect

the emergent economic and strategic alignments amongst countries and regions, including the Pacific Island states. This study traces the stages of economic growth in Asia-Pacific and the convening of regional platforms such as the Association of South East Asian Nations (ASEAN), Asia Pacific Economic Cooperation (APEC), ASEAN+3, and East Asia Summit to aid the regional economic integration. The emergence of the Indo-Pacific construct is explained by evaluating the strategic importance of regional value chains and the global competitiveness for dominating the new technologies that influence both the existing and new centres for the production and consumption of goods and services. The economic construct is specifically explained along the important verticals of connectivity infrastructure for supply chains; role of ASEAN in the new architecture; GVC Integration amongst major partners of Indo-Pacific; cooperation for digital economy; human resources capacities and movement of people; the Pacific Islands in an inclusive Indo-Pacific; and development and cooperation.

Indo-Pacific has high stakes in the new supply chain-led connectivity projects. Restructuring, understanding, and preparing for a connected Indo-Pacific will ensure stable and inclusive growth in the region.

The degree of economic integration, through GVCs, of Indo-Pacific countries including ASEAN, is the bedrock of Indo-Pacific economic architecture. An Indo-Pacific trade and economic cooperation plan must consider China and face the inevitability of supply chain integration between ASEAN and China, and the European Union (EU) and China, amongst others. The question before policymakers is whether the new economic architecture – the Indo-Pacific – can be developed in a highly trade-integrated Asia; even when the strategic cooperation amongst Indo-Pacific members mostly excludes China from their deliberations and dialogues. This study shows that the Indo-Pacific economic architecture is linked to restoring multilateralism that recognises diversity yet leaves no one behind. It explains the building blocks of the new economic architecture in the Indo-Pacific that are already in operation, with the caveat that there are several opportunities, some certainties of success, and a few unknown gaps that will shape progress towards the future.

# COVID-19, Telework Patterns Within a City, and Changes in Urban Structure – Preliminary Findings

## ERIA Discussion Paper No. 430

Ikumo Isono and Kazuhiro Nara

With the coronavirus disease (COVID-19), the spread of teleworking means that people do not necessarily have to live near their place of work. Will the role of cities change in this case? Teleworking patterns within a city matter. According to data from the Tokyo metropolitan area, people who live in a particular part of the city or work in the city centre are more likely to telework. Areas with a higher proportion of managers and professionals have higher rates of telework. Those who can telework may move from central Tokyo to other parts of the country, but the destination is mainly the outskirts of Tokyo. In the suburban areas, there was a positive correlation between the rate of increase in the number of migrants from the 23 wards of Tokyo and the teleworking rate. It is reasonable to assume that areas offering a good living environment are unevenly distributed, that the telework rate is high in these areas, and that the number of migrants is increasing in these areas. The government's story that more people will move to rural areas as a result of widespread telework may not be so simple.

# The Role of the Economic Research Institute for ASEAN and East Asia (ERIA) in Promoting the Regional Comprehensive Economic Partnership (RCEP)

## ERIA Discussion Paper No. 462

Fusanori Iwasaki and Keita Oikawa

This paper aims to understand how the Economic Research Institute for ASEAN and East Asia (ERIA), an international organisation established under the East Asia Summit framework in 2008, contributed to negotiations for the Regional Comprehensive Economic Partnership (RCEP) agreement. Previous international relations studies have analysed the

functions of international institutions, such as providing specialist information, skills, and knowledge, and helping states with international policymaking. In light of the functions of international institutions that the previous studies identified, we examine ERIA's activities in support of the RCEP and their changing characteristics at each phase of the negotiating process: (i) before the launch of negotiations, (ii) during the early stage of negotiations, (iii) during the later stage of negotiations, and (iv) during the implementation phase after conclusion of the agreement. We show that ERIA studied the economic impact and feasibility of implementing the RCEP in the 16 countries participating in the RCEP negotiations before the negotiation launch phase, providing a rationale for establishing the RCEP. In the early stage of negotiations, ERIA promoted ASEAN centrality, which is the key concept of the RCEP negotiations, through research asserting the importance of the ASEAN Economic Community (AEC) and the significance of the RCEP in realising the AEC. In the later stage of negotiations, ERIA expanded its scope of contribution to include more policy-oriented engagement with policymakers in the countries participating in the RCEP negotiations, exemplified by the establishment of ERIA's Policy Design Department in 2016. The Policy Design Department provided technical support for preparing rules of origin and trade facilitation negative lists through capacity building programmes for RCEP negotiators in Cambodia and the Lao PDR. Even after the end of the RCEP negotiations, ERIA conducted capacity development programmes on RCEP issues in various fields (harmonised tariff nomenclature, rules of origin, and e-commerce). Throughout the four phases of the RCEP negotiating process, ERIA provided information-providing and decision-supporting functions. In line with the need for finalizing and implementing the RCEP, ERIA expanded its mission to include the specialist technical-providing function in the last phases.

## The Indo-Pacific Partnership and Digital Trade Rule Setting: Policy Proposals

### ERIA Discussion Paper No. 466

Lurong Chen

The idea of the Indo-Pacific was borne from a global trend that has (re)oriented the centre of the world's economic gravity to the East. Accelerating digital transformation to harness gains from technology are in countries' common interests. The launch of the Indo-Pacific Economic Framework for Prosperity tends to supplement economic benefits to the Indo-Pacific. Becoming more deeply involved in the digital economy will require Indo-Pacific members to commit to new international norms on digital trade, of which trade liberalisation of electronic transmissions, free flow of data with trust, cybersecurity, and intellectual property rights protection must be prioritised.

# 2



TWO

PUBLICATIONS  
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# ENERGY



# Assessing the Impacts of COVID-19: Regional Policies and Practices for Green Recovery

Edited by Venkatachalam Anbumozhi, Kaliappa Kalirajan, and Xianbin Yao



The COVID-19 pandemic is an unprecedented global health crisis. To contain the disease, governments in ASEAN and East Asia have implemented strict lockdowns and curbed mobility, which has stalled economic growth. As the region enters the third year of the crisis, countries have an unprecedented opportunity to use the required state interventions and accompanying stimulus policies to support a green, resilient, and inclusive recovery. Green recovery policies and practices such as investments in renewable energy, resource efficiency, low-carbon transport, and nature-based climate solutions, provide greater socio-economic benefits. This book identifies and analyses the policies and practices that have evolved during the pandemic and their impact on long-term green growth strategy. While the early governmental response to the COVID-19 pandemic had been focused on emergency health responses, in the recovery phase stimulus packages are designed to provide short-term economic gain and enhance the fundamentals of long-term sustainable growth. However, the size of stimulus packages is insufficient to support the environmentally beneficial outcomes that countries are looking for. The book concludes that countries can lay the foundations for long-term sustainability only by implementing economy recovery packages that maximise social objectives in the short term and mitigate climate change impacts in the long term. To ensure green recovery across the region, international cooperation towards implementing large-scale low-carbon energy infrastructure projects and green innovations is an absolute must, as they offer a win-win solution for most of the developing countries and the large emerging markets of the region.

# Exploring Short-term Solutions to the Global Gas Crisis

## ERIA Policy Brief 2022 No. 4

Jun Arima, Hiroshi Hashimoto, Hussein Moghaddam,  
Yudo Dwinanda Priadi, and Alloysius Joko Purwanto

This brief explores short-term solutions for stabilising the global gas market so that the world can continue to recover amidst the Russia-Ukraine geopolitical crisis. The proposed solutions consist of (i) across-the-board ramping up of natural gas and liquefied natural gas (LNG) production; (ii) supporting countries with idle capacities or delayed gas projects in regaining their capacity to produce and export gas, especially to the regions most in need; (iii) an emergency plan initiated by the G20 group to 'reroute' LNG cargoes to the world's regions most in need with low purchasing power; (iv) optimising LNG cargo destinations by taking advantage of specific contractual agreements; (v) issuing statements that can help stabilise the short-term gas market; (vi) intensifying discussions on formulating potential short-term measures to mitigate excessive volatility in prices; and (vii) urgently establishing a universally accessible, real-time information platform on natural gas trade.

# Reframing of Global Strategies and Regional Cooperation Pathways for an Inclusive Net-Zero Strategy in the Energy Transition Framework

## ERIA Policy Brief 2022 No. 9

Fachry Abdul Razak Afifi, Venkatachalam Anbumozhi, Dongmei Chen, Alin Halimaussadiah, Vida Hardjono, Roes E.G. Lufti, Dian Lutfiana, Julio Mauricio, Alloysius Joko Purwanto, Widodo Wahyu Purwanto, Jitendra Roychoudhury, Citra Endah Nur Setyawati, Majed Al Suwailem, and Wing T. Woo

As carbon dioxide emission reductions become increasingly urgent to counter climate change, many nations have announced net-zero emissions targets. Achieving a net-zero economy will require the decarbonisation of electricity generation, massive expansion of low-carbon energy systems, and investment in net-zero-carbon technologies. These adjustments must consider the existing energy, economic, and social development imperatives of advanced and developing countries, while encouraging regional cooperation. This brief assesses energy transition challenges for the Association of Southeast Asian Nations and the Gulf Cooperation Council (GCC), and proposes new policy pathways towards an inclusive global net-zero economy.

# Forecast of Biomass Demand Potential in Indonesia: Seeking a Business Model for Wood Pellets

## ERIA Research Project Report 2022 No. 1

Edited by Shigeru Kimura, Han Phoumin, Alloysius Joko Purwanto, Dian Lutfiana, Yoshinobu Kusano, Cecilya Laksmiwati Malik, and Saleh Abdurrahman

Reduction of coal consumption for power generation and gasoline and diesel consumption for vehicles is indispensable for reducing CO<sub>2</sub> emission in Indonesia. At the same time, the country has significant potential to contribute to reducing coal consumption and gasoline and diesel oil consumption through biomass. This is expected to reduce CO<sub>2</sub> emission and increase the country's renewable energy share to 23% in line with its commitment made during the COP 21 conference on climate change in Paris in 2015 to reduce its greenhouse gas emissions. This study report presents biomass demand from the transportation and power generation sectors as well as biomass supply potential in Indonesia up to 2040 and the development of biomass power generation and the use of wood pellets in Japan. It also proposes a wood pellet business model for Indonesia and provides a set of conclusions and recommendations on how to optimise the role of biomass in achieving low-carbon energy transition in Indonesia.

# Study on Enhanced Flexibilisation of Coal-fired Power Plants for Optimal Grid Stabilisation in the ASEAN Region

## ERIA Research Project Report 2022 No. 2

Edited by Yamada Fumiko, Murakami Kazuyuki, and Han Phoumin

The Association of Southeast Asian Nations (ASEAN) is one of the most dynamic and fastest growing economic regions in the world. The region's heavy reliance on fossil fuels to meet growing energy demand and economic growth has resulted in a threefold challenge of balancing sustainable economic growth; reducing fossil dependency and emissions; and providing energy affordability, reliability, and security. Renewables will play a big role in the energy mix; However, large share of renewables such as wind and solar which are known as variable and intermittent energy could pose constraint on grid stability. In this regard, their massive introduction will only be succeeded in the context of ASEAN's energy system if the existing fossil fuel power plants are appropriately controlled and operated with enough flexibilisation. This study suggests best practical measures and technologies that can be applied to coal fired power plants for their flexible, optimal operation. It is hoped the study will contribute to the stabilisation and sustainability of national and trans-national grids, and the minimisation of negative impacts on both the grid and the existing coal-fired power plants from the massive introduction of renewables.

# Demand and Supply Potential of Hydrogen Energy in East Asia – Phase 3

## ERIA Research Project Report 2022 No. 4

Edited by Shigeru Kimura, Alloysius Joko Purwanto, Ichiro Kutani, Takahisa Hiruma, Dian Lutfiana, and Citra Endah Nur Setyawati

The Hydrogen Demand and Supply Potential Study: Phase 3 assesses and forecasts hydrogen production potential using unused or unutilised energy, which are hydropower sources in isolated areas, gas flared at oil and gas production sites, and low-ranked coal in the East Asia Summit (EAS) region. According to the phase-3 study, this hydrogen production potential is not significant due to limited unused energy sources, but the unused energy does not affect the existing energy supply system. Using unused energy makes sense at the initial commercial stage of hydrogen production, therefore. The study also seeks to identify optimal hydrogen supply networks in the EAS region applying the Linear Programming method. This analysis assesses two modes of hydrogen transport – MCH (Methylcyclohexane) and LH<sub>2</sub> (Liquid hydrogen), of which LH<sub>2</sub> seems to have more benefits in cases of long distances and large hydrogen transportation volumes. As part of this study, regular EAS hydrogen working group meetings were held to share the hydrogen policies of EAS countries, which it is hoped will contribute to achieving a carbon-neutral society by 2050 and identifying issues and challenges surrounding hydrogen technology development. Moreover, two workshops were held to share the key results of the hydrogen potential study phases 1-3 in India and Malaysia with a view to improving a common understanding of hydrogen.

# Decarbonisation of ASEAN Energy Systems: Optimum Technology Selection Model Analysis up to 2060

## ERIA Research Project Report 2022 No. 5

Edited by Shigeru Kimura, Yoshiaki Shibata, Soichi Morimoto, Kei Shimogori, and Yuji Mizuno

During the United Nations Climate Change Conference (COP26) in Glasgow, United Kingdom, many countries committed to achieving carbon neutrality by 2050 or 2060. ASEAN countries will find it very challenging to achieve carbon neutrality as: (i) ASEAN countries depend largely on fossil fuels, coal, and gas for power generation and oil for transport; (ii) ASEAN countries will continue to increase energy consumption to catch up economically with OECD countries, and (iii) variable renewable energy such as solar and wind is not suitable for use in ASEAN countries as the ASEAN region has basically two seasons – dry and rainy – and few areas where wind speed is stable. Variable renewable energy will not, therefore, ultimately contribute to achieving carbon neutrality in the region. To help ASEAN countries achieve carbon neutrality, ERIA, in collaboration with the Institute for Energy Economics, Japan, has been seeking carbon-neutral pathways for ASEAN countries by applying an optimisation approach, i.e. a linear programming model, to choose low- or zero-emission technologies under a carbon dioxide (CO<sub>2</sub>) emission constraint and cost minimisation objective function. Installation of zero-emission energy technologies – hydrogen/ammonia, carbon capture utilisation and storage (CCUS), direct air capture (DAC), and biomass energy with CO<sub>2</sub> capture and storage (CCS) – will show ASEAN countries pathways to achieving carbon neutrality, but they will incur a high marginal abatement cost (MAC) by 2050. Hence, innovation in energy technologies will be essential to lower MAC levels. An estimation of the amount of carbon offset by forests will be another important element in trying to achieve net zero emissions in the ASEAN region.



# Cambodia Energy Statistics 2000–2019

## ERIA Research Project Report 2022 No. 8

Edited by Ministry of Mines and Energy, Cambodia and ERIA

The Cambodia Energy Statistics 2019–2020 provides nationally available energy data before 2010 on coal, electricity, and biomass. The longer historical energy data set provides Cambodia with a good dataset for any energy planning analysis as it is used to predict the future behaviour of energy consumption. Cambodia's total primary energy supply (TPES) increased by an annual average rate of 5.8% from 2000–2010 and by 8.0% from 2010–2019, showing the same trend as total final energy consumption (TFEC). Due to a significant rise in electricity demand, Cambodia rapidly increased hydropower and coal power generation from 2010 to 2019. Liquefied petroleum gas (LPG) – used for cooking in the residential and commercial sectors and the road transport sector, such as in three-wheel tuk-tuks – also had a higher growth rate from 2000–2019 compared with 2000–2010. But traditional biomass has been phased out from the Cambodian market. As a result, TPES without biomass increased by an average 11.1% per year from 2000 to 2019, which is much higher than the economic growth rate. Thus, Cambodia urges the promotion of energy efficiency and conservation, as set out in the publication Energy Efficiency and Conservation Master Plan for Cambodia, prepared with ERIA's support.

# The Strategic and Economic Value of Joint Oil Stockpiling Arrangements for Middle East Exporters and ASEAN Importers

## ERIA Research Project Report 2022 No. 9

Edited by Alessandro Ros Tetsuo Morikawa, Alloysius Joko Purwanto, Majed Al Suwailem iello, Matjaz Vidmar, and Giulia Ajmone Marsan

The study justifies and promotes oil stockpiling in Association of Southeast Asian Nations (ASEAN) countries and explores the possibility of joint stockpiling with Middle East crude oil exporters. Despite ASEAN countries' attempts to decarbonise energy consumption, oil demand in ASEAN will increase and import dependency rise. Considering oil supply risks, oil stockpiling will continue to be needed to tackle supply disruption. ASEAN countries have 20–50 days of oil stocks because of national initiatives, whilst joint oil stockpiling with Middle East crude oil exporters and/or ticket stockpiling with other importing countries offer cheaper options.

The benefit of oil stockpiling exceeds the cost in Indonesia, the Philippines, and Viet Nam. Including joint and ticket stockpiling will reduce stockpiling cost significantly. Joint oil stockpiling with Middle East crude oil exporters has strategic and economic value and creates a win-win situation. ASEAN importers could begin discussions with Middle East exporters; evaluate the advantage of joint stockpiling; and study the feasibility of potential sites, quantities, entities, legal frameworks, and emergency response schemes.

# Decarbonisation of Thermal Power Generation in ASEAN Countries

ERIA Research Project Report 2022 No. 11

Edited by Akira Matsumoto and Han Phoumin

The study on, 'Decarbonisation of Thermal Power Generation in ASEAN Countries' analyses the potential carbon dioxide (CO<sub>2</sub>) reduction that may be achieved through ammonia co-firing in coal-fired power generation. The study suggests addressing several challenges so the potential benefits of utilising fuel ammonia in ASEAN for co-combustion with coal-fired power generation can be fully enjoyed. The study points to the need for developing large-scale infrastructures for the use of ammonia as a fuel and bringing down the supply cost of ammonia. Furthermore, health, safety, and the environment in ammonia supply must be ensured and considered as ammonia is a toxic substance and must be handled with great care by operators with specialised knowledge. The study also considers the possibility of technology innovation for ammonia production and utilisation of existing facilities to deliver and store ammonia.

# Public Attitudes Towards Energy Policy and Sustainable Development Goals in ASEAN

ERIA Research Project Report 2022 No. 12

Edited by Hisashi Yoshikawa and Venkatachalam Anbumozhi

Association of Southeast Asian Nations (ASEAN) Member States (AMS) have taken on ambitious policy goals in relation to Sustainable Development Goals (SDGs). But, like many other countries, they have also been severely affected by COVID-19 and high energy prices. A rapid rise in clean electricity will be one of the keys to achieving SDG 7 but is challenging from the perspective of willingness to pay (WTP). This report summarises the results of Stakeholder surveys on WTP conducted in Myanmar, Lao PDR, Malaysia, the Philippines, Thailand, Viet Nam, and Indonesia. Eighty-five percent of respondents in the countries indicate that they are willing to pay at least 7%–10% more than normal energy prices. The econometric analysis indicates that income, education, age, and gender, as well as public awareness and concerns about climate change, are significant factors influencing WTP. Respondents who are more knowledgeable and more concerned about the adverse effect of climate change show higher WTP. Policies toward SDGs and public reflections are scant in AMS and this study contributes to a better understanding of the public perspective on energy and climate change policymaking in ASEAN.

# The Strategies of National Oil Companies in Southeast Asia under Energy Transition

## ERIA Research Project Report 2022 No. 15

Edited by Ichiro Kutani, Mitsuru Motokura, Masaru Kawachino,  
and Alloysius Joko Purwanto

The national oil companies (NOCs) of the Association of Southeast Asian Nations (ASEAN) must strengthen their efforts to reduce greenhouse gas (GHG) emissions while ensuring a stable energy supply in their existing businesses and low-carbon fields. This report analyses and compares the strategies and activities of the ASEAN NOCs and the Western Oil Majors and compares them with each other.

Focusing on carbon dioxide capture (utilisation) and storage (CCS/CCUS) and hydrogen, for which existing assets can be used, would be one of the most effective measures to reduce GHG emissions. ASEAN NOCs such as Petronas and Pertamina need to accelerate their CCS/CCUS projects in this regard. For now Thailand remains the centre of automobile production in Southeast Asia, so it makes sense for Thailand's PTT to enter the electric vehicle (EV) production and battery fields.

The cooperation of ASEAN NOCs with Western Majors and other companies in different industries can also be effective to formulate the most appropriate energy transition strategy for each company. Exchanges in technologies, financing, and human resource development can contribute to accelerating ASEAN NOC's energy transition road map and business structure transformation.

# Analysis of Future Mobility Fuel Scenarios Considering the Sustainable Use of Biofuels-Phase II

## ERIA Research Project Report 2022 No. 16

Edited by Shinichirou Morimoto, Shabbir Gheewala,  
Nuwong Chollacoop, and Venkatachalam Anbumozhi

Reducing greenhouse gas (GHG) emissions in the transport sector is now attracting attention worldwide. To meet the Paris Agreement 2030 targets, East Asia Summit (EAS) countries have been making great efforts to introduce biofuels on a large scale and electrified vehicles (xEVs) as well. This report presents the results of future scenario analysis of EAS mobility, which greatly contributes to the Sustainable Development Goals (SDGs) in view of the balance between transport CO<sub>2</sub> reduction, biofuel use, and mineral resources demand.

It provides evaluation results of 'well-to-wheel' CO<sub>2</sub> emissions and reductions for producing and using biofuels, and also for implementing xEVs based on the policies of six countries – Indonesia, Malaysia, Philippines, Thailand, Viet Nam, and India. Moreover, future demand for mineral resources such as neodymium (for permanent magnet motors) and cobalt (for lithium-ion batteries) was estimated considering those countries' mobility electrification.

# Special Report of COVID-19 Impacts on Energy Demand and Energy-Saving Potential in East Asia, 2021

## ERIA Research Project Report 2022 No. 17

Edited by Shigeru Kimura and Han Phoumin

The Association of Southeast Asian Nations (ASEAN) and East Asia face tremendous challenges in navigating the future energy landscape and in determining how the energy transition will embrace new architectures, including sound policy and technologies, to ensure access to energy that is affordable, secure, and sustainable. The East Asia Summit (EAS) economies have been hit hard by the coronavirus (COVID-19) pandemic, but energy demand growth is expected to bounce back strongly as the economies recover after 2022. All decisions and energy policy measures will need to be weighed against potentially higher energy costs and security risks in the post-COVID-19 era.

# 3



THREE

## EDUCATION, TRAINING, AND HUMAN CAPITAL

PUBLICATIONS  
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# Inclusive Education: Overcoming Barriers for Students with Disability in ASEAN

## ERIA Policy Brief 2022 No. 2

Rubeena Singh

This policy brief highlights current practices in inclusive education in elementary and secondary schools at the regional level. Please refer to the complementary research paper for detailed information at the country level. Based on analysis of current practices, many countries are making a great effort to include students with disabilities; however, there are gaps in practice and variable understanding of the word 'inclusion'. This brief provides a framework for action – specifically for schools, ministries, and the Association of Southeast Asian Nations (ASEAN) Member States – to implement the ASEAN Comprehensive Recovery Framework. This can help with an inclusive post-coronavirus disease (COVID-19) recovery, as well as address the United Nations Sustainable Development Goals.

# Inclusive Education in ASEAN: Fostering Belonging for Students with Disabilities

## ERIA Research Project Report 2022 No. 3

Edited by Rubeena Singh

In 2021-2022, an external research consultant partnered with the Economic Research Institute for ASEAN and East Asia (ERIA) and conducted a study on inclusive education practices in primary and secondary schools in the ASEAN region and select countries in East Asia. This study summarises key national and international frameworks in the ASEAN region which foster awareness and commitments to inclusive education and provides a country-by-country analysis of the inter-connected domains of inclusive education. These domains provide various entry points for practitioners and administrators to foster belonging for students with disabilities within education systems. Focused on the ASEAN Community Vision 2025's pillars: political-security, economic, and socio-cultural, this study suggests disability inclusion across and within these three pillars is integral for sustainable and prosperous economies. This study summarises key findings of select interviews and qualitative research, shares challenges and opportunities considering the COVID-19 pandemic on inclusive education and provides policy recommendations for relevant stakeholders to contribute to fully inclusive education systems for students with disabilities in ASEAN.

# Empowering Women Entrepreneurs in Eastern Indonesia

## ERIA Research Project Report 2022 No. 13

Edited by Giulia Ajmone Marsan, Amelia Litania, and Lina Maulidina Sabrina

This report assesses women's entrepreneurship trends in Eastern Indonesia compared with national and other provincial averages. The analysis for this study focuses on five regions in Eastern Indonesia: North Sulawesi, East Nusa Tenggara, West Nusa Tenggara, Maluku, and Papua. Despite Eastern Indonesia's potential, the disparity remains significant compared with Western Indonesia, including with respect to the performance of micro, small, and medium-sized enterprises (MSMEs). The report reviews and compares indicators related to economic development and the contribution of women, education, business development, and MSMEs trends. The analysis focuses on challenges and obstacles faced by women-led MSMEs in Eastern Indonesia, as well as measures, initiatives, and policy support schemes to overcome them.

# Technology and Disability: Trends and Opportunities in the Digital Economy in ASEAN

## ERIA Research Project Report 2022 No. 14

Edited by Ashling Cashmore

This report examines the current and potential role of digital technology in fostering the inclusion and economic empowerment of people with disabilities in the ASEAN region. The opportunities brought about by new technologies for people with disabilities in terms of tech-enabled working environments, digital jobs, and education are discussed. The report concludes that – whilst technology is disrupting the status quo – action is needed by multiple stakeholders across ASEAN to fully realise the potential of technology to improve the lives of people with disabilities and to facilitate their inclusion.

# Women and Leadership in the ASEAN Digital Economy: Mapping the Rhetorical Landscape

ERIA Discussion Paper No. 464

Araba Sey and Sara Kingsley

This paper assesses the nature of policy, media, and research representations of women's inequality in digital leadership, reflecting on how clearly they define the issues, causes, solutions, and resource needs. Overall, women's status in digital leadership receives patchy coverage in the media and insufficient depth of examination in academic and policy research. Existing rhetoric recognises women's inequality as a serious problem in the ASEAN digital economy. However, the dimensions, causes, and solutions especially in terms of digital leadership are rarely clearly defined. There is a dominance of economic narratives to support the need for more women in digital leadership, which demonstrates a higher interest in women as an engine of economic growth than in equal representation as a matter of principle. A heavy dependence on global, European, or North American data highlights the need to improve the collection of gender-disaggregated data within the ASEAN economy.

# Gender Security and Safety in the ASEAN Digital Economy

ERIA Discussion Paper No. 465

Araba Sey

Gender-based cyber violence inhibits progress towards gender digital equality by discouraging women from participating in the digital economy. From the magnitude of the problem to its economic and social impacts, much remains to be understood about how women experience safety and security in the Association of Southeast Asian Nations (ASEAN) digital economy. Drawing on academic and grey literature, this paper reflects on the implications of gender-based cyber violence for digital equality and economic development. Overall, data are lacking on the prevalence, economic costs, and social impacts of gender-based cyber violence within ASEAN. Policy tends to focus more on measuring domestic and intimate partner violence, likely due to its designation as the main indicator for Sustainable Development Goal 5. Although a variety of national, regional, and global frameworks exist to address different dimensions of violence against women, cybersecurity, and workplace harassment, more work is needed to identify the scale and scope of gender-based cyber violence in the region, in order to target policy appropriately.

# Availability of Gender-Disaggregated Data on the ASEAN Digital Economy

ERIA Discussion Paper No. 468

Araba Sey

All Association of Southeast Asian Nations (ASEAN) Member States acknowledge the importance of gender data for policymaking on women's economic empowerment and full integration into the economy, and are instituting measures to improve the collection and use of disaggregated data. Considering the central role of the digital economy, it is imperative that any improvements in gender data collection include the production of data on the digital economy. This paper discusses the importance of gender data for the pursuit of gender equality in the digital economy and summarises the current availability of sex-disaggregated data on digital access, skills, and economic activity in the ASEAN region. The results show that there is uneven availability of sex-disaggregated data on the ASEAN digital economy in most global databases. Alternative data sources, such as big data, could help to fill data gaps but should be used with care due to unresolved concerns relating to data bias, privacy, and security.

# Do Management Interventions Last? Evidence from Vietnamese SMEs

ERIA Discussion Paper No. 471

Yuki Higuchi, Vu Hoang Nam, and Tetsushi Sonobe

We conducted randomised experiments to provide management training for 312 small Vietnamese manufacturers in 2010 and repeatedly collected follow-up data in the span of a decade. Analysing panel data constructed from our original surveys with an attrition rate of 4%, we find that our training significantly improved the management quality of the treated entrepreneurs, and such improvement was sustained for at least 5 years. The control entrepreneurs, however, caught up in the longer run.

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FOUR



# FINANCE AND MACROECONOMICS

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# The Global Economic Outlook and the State of Indonesia

## ERIA Policy Brief 2022 No. 5

Ivana Markus and Pyan A. Muchtar

The global economy is facing a perfect storm as a result of the coronavirus disease (COVID-19) pandemic, prolonged geopolitical tensions, soaring inflation, and tightening monetary policy. A darkening future has been projected and the worst is yet to come. Amid global uncertainty, governments have become less aggressive in their budget spending, while high inflation has led many central banks to tighten their monetary policy. Furthermore, the pandemic has left widespread scarring effects, such as unemployment, poverty, and inequality, particularly on vulnerable groups. Global challenges and lower economic growth of the major economies will also affect Indonesia's economic conditions, as the country may experience slower growth as a spillover from its major trading partners. It is important for the world and Indonesia to address these challenges, particularly the scarring effects, through multilateral solidarity and better maintenance of prudent fiscal policy.

# Prediction Errors of Macroeconomic Indicators and Economic Shocks for ASEAN Member States, 1990-2021

## ERIA Discussion Paper No. 431

Masahito Ambashi, Fusanori Iwasaki, and Keita Oikawa

In this study, economic shocks on six selected Association of Southeast Asian Nations (ASEAN) Member States (i.e. Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam) are analysed in three dimensions: global, domestic, and uncertainty. Annual actual and prediction values from 1990–2021 macroeconomic indicators – from international organisations such as the Asian Development Bank – were collected, and macroeconomic shocks were calculated based on prediction errors (i.e. actual values minus prediction values). The first finding is that if prediction errors of the real gross domestic product (GDP) growth rates are negative, on average, the countries were significantly subjected to negative economic shocks that were not anticipated. Second, according to a correlation analysis of the actual values and prediction errors of real GDP growth rates, economic fluctuations and shocks are highly synchronised within the countries as well as with the world, as previous literature has indicated.

Finally, by conducting regression analyses regarding the prediction error of real GDP growth rates separately for each country, (i) variations of the global real GDP growth rate are positively associated with countries' economic shocks; (ii) the previous estimates have different quantitative significance amongst the countries; (iii) residual variations approximate country-specific, domestic shocks; and (iv) global and country-level uncertainty indices are correlated with negative economic shocks in some countries. Based on this dataset, the effect of the COVID-19 pandemic is also reviewed, and economic and historical backgrounds are examined that caused past economic shocks to these ASEAN Member States.



# Regional Comprehensive Economic Partnership, ASEAN's Agency, and the Role of ASEAN Members in Shaping the Regional Economic Order

ERIA Discussion Paper No. 448

Huong Le Thu

The Regional Comprehensive Economic Partnership (RCEP) – a mega free trade agreement comprising 15 countries – the 10 Association of Southeast Asian Nations (ASEAN) Member States and the dialogue partners (China, Japan, the Republic of Korea, Australia, and New Zealand) was finalised in November 2020. This paper looks at the process of the RCEP negotiations as an example of an ASEAN exercising agency. This paper also argues that RCEP asserts the agency of smaller powers within the trade network – ASEAN and its member states – particularly the more active role of individual members, including Viet Nam and Singapore amongst the most diplomatically supportive of the deal.

The circumstances under which RCEP came to life is not trivial. Under Viet Nam's ASEAN chair in 2020, and amidst the global pandemic, RCEP was finalised. RCEP's political and geo-economic significance arguably can overtake its economic role. In the time of great power competition where China becomes one of the key economic centres of the world, and the United States (US) competes with a vision of Indo-Pacific, the region's middle and smaller powers are anxious about becoming 'collateral damage', particularly in the process of US-China 'decoupling'. The ASEAN countries have emphasised the reluctance to 'choose a side'. RCEP shows that they can show agency in carrying out trade liberalisation at the time when the global leader of the US in this field is missing. A mega-trade deal can be successfully led by smaller, and even developing, economies.

# Regional Comprehensive Economic Partnership: Economic Backgrounds of ASEAN and its Dialogue Partners

## ERIA Discussion Paper No. 449

Keita Oikawa, Fusanori Iwasaki, and Shujiro Urata

We overview the economic backgrounds of the countries participating in the Regional Comprehensive Economic Partnership (RCEP) negotiations and two Association of Southeast Asian Nations (ASEAN) Dialogue Partners – the United States (US) and the European Union (EU) – to understand their economic relationships before the signing of the RCEP and their economic interests in the RCEP. We discover that the 16 countries participating in RCEP negotiations vary in terms of economic size, income level, growth pattern, share of trade in the economy, and foreign direct investment (FDI) flows. Additionally, both lower- and higher-income ASEAN Member States (AMS) have received a large amount of FDI, in contrast to Japan and the Republic of Korea (henceforth, Korea), which have seen more FDI outflows from their countries than inflows. In terms of bilateral FDI inflows and outflows, as a centre for regional FDI, Singapore attracts FDI from developed countries (including the US and the EU) and reinvests it in India and other AMS. As an FDI hub, Singapore promotes liberalised regional markets to attract advanced country investors. By examining bilateral trade relationships, we find that as the centre of manufacturing in the world, ASEAN and China have participated in international production networks that also include Japan and Korea since 2000. Japan and Korea have maintained competitiveness in intermediate goods in the region's production networks, while China notably exports final products to the US and the EU. Amongst the 16 countries participating in RCEP negotiations, India has not had a significant presence in the production networks. Indeed, India has expanded its bilateral trade deficit with China, which probably caused India to withdraw from RCEP negotiations to protect its manufacturing industry. Simulation results of the impacts of the RCEP, using a computable general equilibrium (CGE) model (Global Trade Analysis Project model), show that the countries participating in RCEP negotiations – particularly the less developed AMS – would gain greatly from lowering services trade costs and investment liberalisation. India would also gain significantly from the RCEP. In contrast, countries not participating in RCEP negotiations (the US and the EU) would experience small negative impacts of the RCEP through trade diversion effects.

# Impact of the Regional Comprehensive Economic Partnership (RCEP): A Global Computable General Equilibrium (CGE) Simulation

ERIA Discussion Paper No. 451

Ken Itakura

This study estimates the potential economic effects of the Regional Comprehensive Economic Partnership (RCEP) by using a recursively dynamic computable general equilibrium (CGE) model, which incorporates the global supply chains (GSCs) structure, also referred as the global value chains (GVCs). The tariff reduction schedules for the RCEP agreement are incorporated in addition to other large FTAs, such as the CPTPP. Second, the structure of GSCs is included in the CGE model to take into account the importance of trade in intermediate goods and services. This study implements the RCEP simulation scenarios for tariff reductions, services trade liberalization, logistic improvements, and investment commitments. Results show that the real GDP of RCEP members increases by \$675 billion in total, of which ASEAN grows by \$160 billion.

# Japan and the Regional Comprehensive Economic Partnership (RCEP)

ERIA Discussion Paper No. 461

Mie Oba

This paper aims to clarify the role of Japan in the process leading up to the establishment of the Regional Comprehensive Economic Partnership (RCEP). While emphasising that respect for the centrality of the Association of Southeast Asian Nations (ASEAN) was a principle of RCEP, Japan played a leading role in the process of RCEP negotiations. For Japan, RCEP is one of the fruits of its strategy in East Asia/Asia-Pacific that began the mid-1990s to protect and increase the interests and advantages of Japanese business and retain Japan's political leverage in the region.

When substantial negotiations for RCEP began in 2013, its importance for Japan was secondary to other free trade agreements (FTAs) including the Trans-Pacific Partnership, China-Japan-Korea FTA, and Japan-European Union FTA. However, the Government of Japan and the business community had set a lot of economic and strategic goals in promoting RCEP. After the withdrawal of the United States (US) from the Trans-Pacific Partnership, RCEP was seen as an essential framework for establishing a rules-based regional order in the Indo-Pacific region. Although it was after India's withdrawal from the RCEP negotiations, Japan further emphasised the importance of RCEP as the measure to

sustain and foster the rule-based regional order and simultaneously pursued the conclusion of negotiations and the establishment of high-level rules, achieving some success. Ultimately, the havoc brought about by the coronavirus disease (COVID-19) pandemic and the sense of crisis in the traditional liberal international order caused by the intensifying strategic competition between the US and China, drove the conclusion of RCEP.

RCEP will be increasingly important for economic order in Japan and Asia in the coming years. Ironically, as the strategic competition between the US and China escalates and leads to a surge in protectionism, the economic and strategic importance of RCEP – an FTA that incorporates China – is becoming more significant as a measure to counter unilateralism and protectionism. In addition, RCEP needs elements that address globalisation's adverse effects and pitfalls, in areas such as the environment, labour rights, and a reduction in the disparity between the rich and poor.

## RCEP and Indonesia: Economic Reform and Prospects for Implementation

### ERIA Discussion Paper No. 467

Yose R. Damuri and Deni Friawan

The conclusion of the Regional Comprehensive Economic Partnership (RCEP) is very important for Indonesia as it may bring many benefits to the country. This paper is an attempt to see the role of domestic political-economy dynamics in facilitating and constraining Indonesia's decision to join, ratify, and implement a free trade agreement (FTA). It also seeks some understanding on whether an FTA can bring significant market liberalisation. This paper focuses on two areas of observation. First, it discusses the current progress of the legislative process and public acceptance of the RCEP agreement in Indonesia and how the process is influenced by the political-economy dynamics of the country. Second, the paper also looks at the potential impacts of the agreement on Indonesia's current reform agenda, especially the recently passed Jobs Creation Law (Law No. 11/2020). For these observations, we conduct a content analysis on RCEP-related news published in two newspapers in Indonesia, namely Kompas and the Jakarta Post. In addition to content analysis, we also conducted interviews with stakeholders, including parliament members and government officials from the Ministry of Trade who have been actively involved in RCEP negotiations and the ratification process. The paper provides some remarks and recommendations for the future agenda of RCEP ratification and implementation in Indonesia.

# 5



FIVE

## HEALTHCARE AND AGEING SOCIETY

PUBLICATIONS  
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# Older People and COVID-19 in Indonesia (2022 Edition)

Edited by Ni Wayan Suriastini, Endra Dwi Mulyanto,  
Ika Yulia Wijayanti, Osuke Komazawa, Takuma Kato, Maliki,  
and Dinar Dana Kharisma



The second round of phone surveys 'Older People and COVID-19 in Indonesia' is a follow-up to the first-round survey. It was a joint project of ERIA, Bappenas, and SurveyMETER. This follow-up survey aimed to (1) compare the welfare of older people before and during the coronavirus disease (COVID-19) pandemic between July 2020 and November 2020, (2) compare the difficulties they faced between July 2020 and November 2020, (3) understand the changes in social assistance received by older people as a response to COVID-19 in July 2020 and November 2020, and (4) identify the most suitable policies to mitigate the impacts of the pandemic on older people based on the change of situation during the pandemic.



Results show that some older people were still experiencing a decline in income in November 2020. The impact of the pandemic on food consumption changed from July 2020 to November 2020. Fewer older people received social assistance in November 2020 compared with July 2020. Older people preferred cash assistance to in-kind assistance. Better access to health services led to more proper diagnoses so that more older people with physical health problems were identified. Moreover, older people's mental health improved slightly over the survey period. However, several respondents still had problems accessing healthcare facilities and ran out of medicines. The risk of social isolation decreased in the course of the pandemic and a declining trend was also observed in the number of beneficiaries of social support. An integrated older people care assisted by digital technology is recommended to facilitate supporting older people's needs with available services. It is also appropriate in a pandemic setting by potentially accelerating service provision and reducing infection risk.



# Agents of Care Technology Transfer: Trends and Challenges of Migration Care Workers Across Borders

## ERIA Research Project Report 2022 No. 6

Edited by Yuko O. Hirano, Osuke Komazawa, and Nagasaki University

The purpose of this project is to show the models of promoting the transfer of knowledge and skills of Long-term care (LTC) from the destination countries (Japan) to the sending countries (Indonesia) of care workers. Containing both original / secondary, and quantitative / qualitative data, this report was written by research members of diverse discipline. This report comprises 5 chapters, including, comparison of the definition of 'care' or LTC between Japan and Indonesia (Chapter 1), discussing the policies of the Japanese government on migrant care workers who engage in LTC (Chapter 2), discuss the policy of recruiting migrant care workers through the cost analysis (Chapter 3), discussing the role of returnees by targeting Vietnamese EPA care workers who have already gone back to their home country (Chapter 4) and developing the oral care check list, based on the anatomical and physiological functions in preventing aspiration pneumonia. The check list is used to compare the degree of implementation of the care, by Indonesian care workers in Japan and in Indonesia (Chapter 5).

# Health and Long-term Care Information in Ageing Asia

## ERIA Research Project Report 2022 No. 7

Edited by Reiko Hayashi and Osuke Komazawa

Global ageing is continuing. Not only the proportion of older persons, but also the absolute numbers of older persons in emerging countries have been increasing more rapidly than in high-income countries in the past. This report identifies what information is needed to assess health and long-term care in ageing Asia in three parts. In part A, cause of death statistics in ASEAN+3 countries are examined. While several countries are capable of registering all deaths with causes of death, some are collecting information using sample surveys, and countries without registered based vital statistics are now implementing new technologies of civil registration. Part B is an updated analysis of demand and supply of long-term care in Asia, from the research conducted by the same authors (ERIA Research Project Report 2018, No.08). South-Central and West Asian countries, where female labour participation is different from East and Southeast Asia, are included in the analysis. In Part C, the Vietnamese register-based population data is analysed as an example of a potential data source. Each country in Asia is facing its own challenges in getting better population health information, and regional cooperation is crucial for making progress.

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# INDUSTRY AND MANUFACTURING

# ASEAN's Role in the Threat of Global Economic Decoupling: Implications from Geographical Simulation Analysis

## ERIA Policy Brief 2022 No. 10

Ikumo Isono and Satoru Kumagai

The war between Russia and Ukraine since February 2022 has triggered renewed concerns about global economic decoupling. Although the face-to-face meeting between the United States and China leaders in November 2022 agreed to continue the dialogue, it is premature to assert that progress has begun in the direction of avoiding decoupling. We used the geographical simulation model (IDE/ERIA-GSM) to examine the possible economic impacts of global economic decoupling on the Association of Southeast Asian Nations (ASEAN). We define decoupling as policy changes that raise barriers to trade in goods and services and firms' responses to these changes. If policy decoupling occurs despite the efforts of economic agents, the global economy is negatively affected. ASEAN has a relative advantage through positive trade diversion effects if it does not join any of the groups. Adherence to a rules-based international trade order will ultimately benefit ASEAN Member States and people. ASEAN should demonstrate ASEAN centrality and show the world its efforts to avoid decoupling. It should also avoid participating in decoupling if it occurs.

# Economic and Technical Cooperation in the Regional Comprehensive Economic Partnership: Focus Areas and Support for Small and Medium-sized Enterprises

## ERIA Discussion Paper No. 459

Cassey Lee

The war between Russia and Ukraine since February 2022 has triggered renewed concerns about global economic decoupling. Although the face-to-face meeting between the United States and China leaders in November 2022 agreed to continue the dialogue, it is premature to assert that progress has begun in the direction of avoiding decoupling. We used the geographical simulation model (IDE/ERIA-GSM) to examine the possible economic impacts of global economic decoupling on the Association of Southeast Asian Nations (ASEAN). We define decoupling as policy changes that raise barriers to trade in goods and services and firms' responses to these changes. If policy decoupling occurs despite the efforts of economic agents, the global economy is negatively affected. ASEAN has a relative advantage through positive trade diversion effects if it does not join any of the groups. Adherence to a rules-based international trade order will ultimately benefit ASEAN Member States and people. ASEAN should demonstrate ASEAN centrality and show the world its efforts to avoid decoupling. It should also avoid participating in decoupling if it occurs.

# Global Value Chain Participation and Labour Productivity in Manufacturing Firms in Viet Nam: Firm-Level Panel Analysis

ERIA Discussion Paper No. 463

Upalat Korwatanasakul and Tran Thi Hue

This study describes the status of global value chains (GVCs) in Viet Nam and examines the roles of GVC participation and technology in enhancing labour productivity in manufacturing firms. The estimation method is a panel fixed-effect regression employing unique firm-level data matching the Vietnam Technology and Competitiveness Survey and Vietnam Enterprise Survey, 2009–2018. The findings show the positive effect of backward GVC participation when considering firm GVC participation status (i.e. whether they engage with backward linkages). However, when accounting for GVC participation degree (i.e. GVC participation index), the results show a stark contrast, revealing the negative effect of backward GVC participation on labour productivity. The results, therefore, partly reject the learning-to-learn hypothesis. On the other hand, regardless of GVC indicators, forward GVC participation positively impacts labour productivity, confirming the views of learning-by-exporting and learning-by-supplying. The findings also suggest the significance of research and development, digital technology, and foreign investment in enhancing labour productivity. Therefore, policies promoting forward GVC participation should be the priority, while policies to promote backward GVC participation should be well designed and accompanied by policies that ensure technology transfer and domestic technology development to avoid the trap of a subordinate role.



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SEVEN

# INNOVATION AND TECHNOLOGY

PUBLICATIONS  
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## New Normal, New Technologies, New Financing

Edited by Lili Yan Ing and Dani Rodrik

While the coronavirus disease (COVID-19) seems to be behind us now, the scarring effects on employment, poverty, and education will last forever. Women, youth, and less educated groups of the population have been disproportionately affected. Moreover, the current war in Ukraine and rising global tensions have placed additional pressures on the world economy. The fact that now countries, particularly low- and middle-income countries, have limited fiscal space means the rising geopolitical tensions have widened inequality and worsened the recovery process. The G20 could be an effective international forum to foster a coordinated global response to establish and deliver commitments for resilient, sustainable, and inclusive growth. This report consists of three main sections: economic recovery, digital transformation, and sustainable development.



## Accelerating Digital Transformation in Indonesia: Technology, Market, and Policy

Edited by Lurong Chen, Kalamullah Ramli, Fithra Faisal Hastiadi, and Muhammad Suryanegara

The Association of Southeast Asian Nations (ASEAN) and East Asia have made remarkable achievements in economic development. Whether the region can continue its rapid growth will to a great extent depend on how well it manages the digital transformation. An indepth understanding of the advantages and disadvantages of ASEAN Member States and other countries in the region will help smooth the digital transformation and unleash the development potential in the digital era. In this context, the ERIA has undertaken a series of policy-oriented research projects on the digital economy since 2016. These studies aim to provide policy suggestions for ASEAN and East Asia on how to accelerate the pace of digital transformation in the region with a balance between efficiency and inclusiveness, and in the long term, how to synchronise the interaction amongst digitalisation, competition, innovation, and human development in Asian development.





# Mapping Innovation-Driven Entrepreneurial Ecosystems: An Overview

## ERIA Policy Brief 2022 No. 1

Alessandro Rosiello, Matjaz Vidmar, and Giulia Ajmone Marsan

Innovation-driven entrepreneurship enables people and companies to pursue global opportunities based on innovative processes, products, or services. Studies show that innovation-driven entrepreneurial high-growth firms represent a small fraction (<10%) of all start-ups but create more than 50% of jobs and are more resilient during crises, including the recent coronavirus disease (COVID-19) pandemic. However, their growth depends on an entrepreneurial ecosystem surrounding them, including access to key markets, finance, networks, and human resources, especially new knowledge and education. To ensure the development of innovation-driven entrepreneurial activities, their geographical and sectoral distribution needs to be mapped, but indicators are lacking, especially for the Association of Southeast Asian Nations (ASEAN). New sources of data, including social media, offer a new way to expand these indicators, and we propose a new methodology to identify emerging places of innovation-driven entrepreneurship (E-PIE).

# Redefining Indonesia's Digital Economy

## ERIA Policy Brief 2022 No. 6

Militcyano Samuel Sapulette and Pyan Amin Muchtar

The Indonesian digital economy is the largest and most attractive investment destination amongst the Association of Southeast Asian Nations (ASEAN) Member States (AMS). The sector has grown more than fourfold in the last 4 years and has supported other sectors. Amid the exponential growth, digital businesses are facing what is called a 'tech winter' in which start-ups are likely to experience slowdowns or even bankruptcy. In addition, although the digital transformation helps businesses improve productivity and drive economic growth, it has consequences for employment and wages, particularly for less skilled workers. While the potential of the digital economy must be continuously harnessed, some key initiatives need to be implemented to mitigate its negative effects.

# ASEAN Digital Community 2040

## ERIA Policy Brief 2022 No. 11

Lili Yan Ing and Ivana Markus

Digital transformation (DX) is one of the most crucial innovations to have changed modern life over the last decade. The number of annual installations of industrial robots worldwide has more than doubled. Technological revolutions have led to unprecedented changes in what and how we trade. The Association of Southeast Asian Nations (ASEAN) is on track to grow its digital community, with a rising number of internet users and greater internet penetration. However, one of the main concerns in the growing DX era is the digital divide within and across countries including in ASEAN, which is reflected in the gaps in internet speed, usage, and technology production amongst ASEAN Member States. Other challenges in DX are privacy, cybersecurity, and competition concerns. The ASEAN Chairmanship in 2023 could address several DX challenges to move towards the vision of a thriving ASEAN Digital Community by 2040 through implementing ASEAN commitments, improving the quality of key digital enablers for digital technology adoption, enhancing countries' preparedness for digital transformation, and improving the quality of privacy and competition laws to address the costs and risks of DX.

# Small Modular Reactor (SMR) Deployment: Advantages and Opportunities for ASEAN

## ERIA Research Project Report 2022 No. 10

Edited by Tomoko Murakami and Venkatachalam Anbumozhi

Small modular reactors (SMRs) are advanced nuclear reactors that have a power capacity of up to 300 MW per unit, which is about one-third of the generating capacity of traditional nuclear power reactors. SMRs that inherently have a lower carbon footprint than fossil fuel plants can be used in locations not suitable for larger nuclear power plants. SMRs offer savings in cost and construction time, and they can be deployed incrementally to match increasing energy demand in Association of Southeast Asian Nations (ASEAN) countries. This report examines the design attributes of SMRs in terms of efficiency, economics, flexibility, and business eco-system, for their deployment in advanced economies and ASEAN Member States. Compared with existing reactors, SMR designs are generally simpler, and the safety concept for SMRs often relies more on passive systems and inherent safety characteristics of the reactor, such as low power and operating pressure. In ASEAN countries, SMRs, when deployed, could be paired with and increase the efficiency of renewable sources in a hybrid energy system. These characteristics position SMRs well to play a key role in the clean energy transition, while also helping countries address the climate goals. As global efforts seek to implement innovative low-carbon energy solutions, the increased use of renewable energy coupled with the introduction of SMRs has the potential to fill such gaps, but open discussions are needed amongst the key stakeholders.

# Study on Policies and Infrastructure Development for the Wider Penetration of Electrified Vehicles in ASEAN Countries

ERIA Research Project Report 2022 No. 18

Edited by Naoko Doi, Alloysius Joko Puranto, Shigeru Suehiro, Toshiya Okamura, Kazuhisa Takemura, Masami Iwai, Akira Matsumoto, and Keita Katayama

This report provides well-to-wheel CO<sub>2</sub> emissions from the electrification of the transport sector, and identifies the strengths, weaknesses, opportunities, and threats (SWOT) for selected Association of Southeast Asian Nations (ASEAN) countries – Indonesia, Thailand, Malaysia, Viet Nam, and Brunei Darussalam. It also contains analysis of passenger vehicles' total cost of ownership for internal combustion engine vehicles, hybrid electric vehicles, plug-in hybrid electric vehicles, and battery electric vehicles. The report explores the tipping point for battery electric vehicles to become cost-competitive vis-à-vis internal combustion engine vehicles, for passenger vehicles, buses/trucks, and motorcycles. Finally, the report provides a set of recommendations for the different ASEAN countries concerning the choice of transport modes where electrification should be given priority and the policies needed in relation to countries' ambitions, such as Indonesia's and Thailand's goal to become EV production hubs in ASEAN.

# Opportunities and Challenges for ASEAN and East Asia from the Regional Comprehensive Economic Partnership on E-Commerce

ERIA Discussion Paper No. 443

Jane Kelsey

The Regional Comprehensive Economic Partnership (RCEP) is a microcosm of the current tensions in negotiations on digital trade involving parties that have divergent positions on the digital economy, data, and regulation, including within the Association of Southeast Asian Nations (ASEAN) itself. It adopts a prudent approach that recognises the state parties need flexibility and policy space at the national and regional levels to develop of policy and regulation in the rapidly changing digital ecosystem and seeks to advance their collective interests through dialogue and cooperation. This paper contrasts that approach with the disciplinary nature of binding legal obligations that are enforceable by other states and their investors, as in the Trans-Pacific Partnership Agreement and similar recent treaties. The analysis of key differences focuses on matters of particular importance to ASEAN, such as local content and government procurement, data rules and flexibilities, financial data, source codes, and transparency. RCEP's cautious approach enables ASEAN members to deepen their national and regional understanding of the opportunities and challenges these agreements present, whilst developing and implementing their own digital development strategies. Yet those good efforts may be undermined through the binding and enforceable trade in services rules.

# Adoption of Sustainable Practices for Improving Agricultural Productivity in Viet Nam

## ERIA Discussion Paper No. 470

Huong-Giang Pham, Tuong-Anh T. Nguyen, and Hoang-Nam Vu

Conventional agricultural methods are putting considerable strain on developing countries' environments. This problem can be ameliorated through the adoption of Sustainable Agricultural Practices (SAPs), which can bring economic, ecological and social benefits for farmers, consumers and the overall economy. However, the adoption rates of SAPs remain low in many developing countries. It is therefore vital to provide empirical evidence on the improvement of agricultural productivity as it may assist policymakers in designing suitable policy as well as encourage farmers to adopt SAPs on their farms. This study analyses the impacts of different SAP adoption packages on land productivity and labour productivity in Viet Nam. This is the first attempt in the context of Viet Nam to investigate the economic effects of adopting different SAP packages including crop diversification (CD), conservation agriculture practices (CA) and a combination of those. Using panel Viet Nam Access to Resources Household Survey (VARHS) data with multinomial endogenous switching regressions and an instrumental variable helps reduce potential biases in impact evaluation that previous studies have not fully addressed. Results confirm that if a farmer adopts SAPs, it may raise his net profit per hectare by about 4 million Vietnamese Dong (D)/ha/year, whereas the agricultural income per hectare increases by about 4–6 million D/ha/year. Moreover, the joint adoption of multiple SAPs brings higher benefits (of about 2–4 more million D/ha/year) than single SAP adoption. These findings suggest that policymakers and related stakeholders should focus on promoting the adoption of a combination of crop diversification and conservation practice

# Productivity Effects of Viet Nam's Rice Land Restrictions

## ERIA Discussion Paper No. 472

Peter Warr and Huy Quynh Nguyen

Viet Nam's 1986 programme of market-oriented economic reforms did not include the freedom of farmers to choose their crops independently. Large areas of land remain restricted to rice production. This paper studies the effects of this policy on agricultural productivity, using panel data from the Viet Nam Access to Resources Household Survey (VARHS), covering the years 2008 to 2016. The econometrics uses fixed effects methods with and without the additional use of instrumental variable methods to allow for the possible statistical endogeneity of the restrictions. The findings are that the crop choice restrictions reduced the overall productivity of annual crop land by about 5%, reduced the overall productivity of farm labour by about 8% and reduced the mean incomes of farm households by 5%–6%, implying increased levels of rural poverty. Moreover, rice output would have been no lower if the restrictions were removed.



# 8



EIGHT

PUBLICATIONS  
CATALOGUE 2023

# TRADE AND INVESTMENT

# Non-tariff Measures Australia, China, India, Japan, New Zealand, Republic of Korea

Edited by Lili Yan Ing, Denise Penello Rial, and Rizqy Anandhika



Non-Tariff Measures (NTMs) have become increasingly numerous and prominent. The majority of these NTMs are imposed for reasons not primarily related to trade: for human, plant, and animal, health, and environmental protection, but nonetheless affect international trade.

The fact that NTMs can affect market access, as well as altering prices and quantities traded, is relevant in view of achieving global and regional economic integration. It highlights the fundamental demand for transparency, to understand the mapping of regulations that are affecting exports and imports within own country as well as in partner countries. Transparency, i.e. availability of comprehensive and accurate data, also paves the way to building approaches to measuring their impact on international trade and development.

ERIA and UNCTAD collaborate to expand the NTM database using a methodology that ensures consistency in the approach taken to collect and classify data in every country. Using UNCTAD's methodology ensures standardisation of the process and the final result. At first, NTM data for ASEAN countries in 2014 were successfully collected. Upon request, by member States to support the negotiations of the Regional Comprehensive Economic Partnership (RCEP), the NTM data for Australia, China, India, Japan, Republic of Korea, and New Zealand were then mapped. The database helped navigate the current NTMs regimes in the RCEP members. The data for India are still relevant because the ASEAN-India Free Trade Area (AIFTA) is in force. The databases for all 16 countries are publicly available on the Trade Analysis Information System (TRAINS) website of ERIA and UNCTAD, <https://unctad.org/topic/trade-analysis/non-tariff-measures>

# New Dynamism in ASEAN and East Asia: The Role of the RCEP as a 'Living' Agreement

## ERIA Policy Brief 2022 No. 3

Shandre M. Thangavelu, Fukunari Kimura, Shujiro Urata, and Dionisius A. Narjoko

This policy brief highlights the importance of maintaining open regionalism and economic and regional integration for sustainable and inclusive regional and global growth in the Association of Southeast Asian Nations (ASEAN) and East Asia. With rising global uncertainties and global value chain (GVC) disruptions, the region requires a new economic and social agenda beyond trading arrangements, and the alignment of global, regional, and domestic policies and structural issues. The Regional Comprehensive Economic Partnership (RCEP) is expected to provide a new institutional framework under the built-in institutional feature (Chapter 18) of the agreement.

# Facilitating Global Trade and Investment and Leveraging Value Added in Downstream Industries

## ERIA Policy Brief 2022 No. 7

Raihan M. Ramadhan and Pyan Amin Muchtar

Despite facing global uncertainties, Indonesia has achieved macroeconomic stability, supported by strong responses in fiscal and monetary policy, as well as robust domestic supply chains. By using its natural resources and following the global trend of green industries, Indonesia aims to become a key player in the global renewable energy market. Sound infrastructure is one of the key requirements to attract high-profile investments, but Indonesia struggles with poor and unequal infrastructure. Cumbersome bureaucracy and restrictiveness towards services trade also hinder the nation from reaching its potential. Strengthening physical, human, and institutional infrastructure will help the country secure investments and boost trade

# Structural Transformation and the Global Production Value Chain: Potential Impact of the Cambodia–Republic of Korea FTA on Cambodia

## ERIA Policy Brief 2022 No. 12

Shandre M. Thangavelu and Vutha Hing

This policy brief examines the structural transformation of the Cambodian economy based on the impact of the CKFTA in terms of trade, output growth, and employment. It summarises the key results of the CKFTA study that examined the impact of the CKFTA on the Cambodian economy – specifically quantitative (structural gravity model estimation and simulation) and qualitative trade policy evaluation in terms of exports, output, and structural transformation of the economy in the global and regional value chains. The policy brief also highlights the key benefits of the CKFTA to the Cambodian economy.

# What Determines Interfirm Trade Credit? Empirical Evidence from the ASEAN

## ERIA Discussion Paper No. 432

Sasidaran Gopalan and Ketan Reddy

This paper empirically examines the link between the heterogeneity of firms and their probability of obtaining interfirm trade credit in Asia, with a specific focus on the Association of Southeast Asian Nations (ASEAN) bloc of economies. In doing so, the paper investigates the following three issues: to what extent firm size plays a role in obtaining trade credit, to what degree a firm's integration into global value chains affects its probability of obtaining trade credit, and the impact of agglomeration on firms' likelihood of obtaining trade credit.

# Australia's Interests in East Asia's Regional Comprehensive Economic Partnership

ERIA Discussion Paper No. 433

Shiro Armstrong

The Regional Comprehensive Economic Partnership (RCEP) agreement was seen as important for Australia economically and politically from its inception. RCEP economies account for roughly two-thirds of Australia's total trade and being part of an Association of Southeast Asian Nations (ASEAN)-led initiative that progressed broader East Asian economic integration was consistent with the structure of Australia's trade interests and with Australia's support for the multilateral trading system. Australia has a track record of pursuing regional cooperation that supports multilateral trade and for supporting regional integration that is outward oriented. RCEP became more important economically, politically, and strategically throughout its negotiations. It furthered East Asian economic integration that avoided fragmentation but also to entrench the ASEAN Economic Community project. Concluding RCEP took on greater importance and urgency as a ballast against the rising protectionism globally in the latter half of 2010. The ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) included an economic cooperation agenda focused on capacity building that was seen as a success for its members and shaped Australia's approach and support towards economic cooperation being a pillar of RCEP. Negotiations for RCEP were chaired and led by Indonesia and ASEAN. Australia played a proactive role in pushing for high standards - credible market access commitments and new rules - in negotiations. Australia was one of the RCEP member countries that was also negotiating the Trans-Pacific Partnership (TPP) in parallel. The interest in the TPP was to keep the United States productively engaged in the region and to further rule-making and liberalisation amongst the TPP members. Having overlapping membership between the TPP and RCEP would mean that there was less chance of significant divergence or inconsistencies between them, although the approach differed. The deterioration of Australia's economic and political relationship with China makes the RCEP framework potentially more important for facilitating the rebuilding of trust and confidence.



# China and the Regional Comprehensive Economic Partnership: An Economic and Political Perspective

ERIA Discussion Paper No. 434

Zhang Yunling

This paper studies China's policies and participation in East Asian economic integration and cooperation. The progress of the Regional Comprehensive Economic Partnership (RCEP) is remarkable in the time when global as well as regional economies are facing so many challenges. China as the largest economy in East Asia plays a key role in sustaining regional dynamism. China is active and constructive in initiating the Association of Southeast Asian Nations (ASEAN+1) free trade agreements (FTAs) and an integrated framework of FTAs in East Asia. As RCEP was initiated by ASEAN and supported strongly by China it is essential to keep East Asian economic dynamism: the conclusion of the RCEP negotiations and the implementation has great effects. China's gains from RCEP are not just economic, but also political. Whilst this paper focuses on economic gains for China, it also analyses the political gains for China, for example, against 'decoupling' and political division, which is harmful to East Asian integration and cooperation.

The novel coronavirus disease (COVID-19) pandemic is still ongoing, so the timely enforcement of RCEP is important as it gives confidence to the region to keep the region open and to work together to make East Asia dynamic in facing the challenges. Some challenges for East Asia are (i) how to rebuild the supply chains that are either weakened or broken by the pandemic; (ii) how to overcome the new barriers created by government policies in the name of 'national security' both in trade and investment areas; and (iii) how to overcome the new divisions created by the United States' policy under its comprehensive strategic competition with China that leads to the exclusive arrangements in East Asia.

East Asian economic integration and cooperation are based on two basic principles: openness and inclusiveness. As a region with great diversity, it is crucial to provide opportunities for all parties with difference. China will continue its open policy and actively participate in multilateral and regional arrangements, and as the largest economy in East Asia it serves as a key pillar to be a centre of the global economy. China will take RCEP as an essential framework to enhance its interest and role in East Asia, as well as in the Asia-Pacific against a politically oriented Indo-Pacific initiative.

# Heyday of Asian Regionalism? The Implications of the Regional Comprehensive Economic Partnership for the United States

## ERIA Discussion Paper No. 435

Mireya Solís

This paper analyses the implications of the entry into force of the Regional Comprehensive Economic Partnership (RCEP) for the United States (US). Traditionally, trade policy has been central to the United States' aim to position itself as a Pacific power and architect of the evolving regional economic architecture. Over the years, however, US trade strategy has evolved in distinct ways: from an emphasis on bilateral trade negotiations and open regionalism (in the Asia-Pacific Economic Cooperation [APEC] forum) to the pursuit of a high-standard transregional trade agreement (in the Trans-Pacific Partnership [TPP]); and more recently under the Trump administration the pursuit of unilateralism and the resort to tariffs as a form of leverage vis-à-vis competitors (China) and partners (allies in Europe and Asia) alike. When the RCEP negotiations launched, there was little concern in US policymaking circles that the emerging trade grouping in Asia could be disadvantageous for the US given that the TPP project was an effective vehicle to advance the US vision for quality economic integration and to cement its position in the dynamic Asian region. However, the US withdrawal from the TPP and the successful conclusion of the RCEP talks (even with the absence of India) have changed that calculus. This paper identifies three main implications of RCEP for the United States at this juncture: growing marginalisation from intra-Asian trade, diminished rulemaking capabilities as alternative standards disseminate widely in the region, and lessened diplomatic clout as the United States struggles to incorporate trade liberalisation into its Asia policy. A fourth possible consequence – a renewed interest in joining the Comprehensive and Progressive for Trans-Pacific Partnership – has not materialised. Instead, the Biden administration is developing an Indo-Pacific Economic Framework that will not include market access negotiations but will focus instead on issues such as supply chain resilience, infrastructure, and the digital economy. The ability of the United States to offer a compelling plan of economic engagement with the region is in question, raising the spectre of marginalisation whilst Asian regionalism makes strides.

# Changes in Trade and Investment Policies in Thailand and the Implications for Medium-term Growth

## ERIA Discussion Paper No. 436

Archanun Kohpaiboon and Juthathip Jongwanich

This paper addresses the noticeable changes in trade and investment policies in Thailand in the new millennium and assesses their impact. These changes began with trade policy changes from the World Trade Organization to free trade agreement (FTA)-induced liberalisation, followed by changes in investment policies, all of which are to boost firms' productivity and medium-term growth. Our results suggest that the policy changes are yet to produce the output the government expects. The signed FTAs' impact on trade has been limited so far and has occurred selectively on certain product lines, as did the FTA-induced direct investment. Similarly, changes in investment policies had the impact of enticing direct investment but this varied across investors' nationalities. The impact on firm productivity is also limited and found only for investment promotion policies. Our analysis highlights the role of traditional tools, i.e. trade openness, research and development, and skills upgrading, in fostering firm productivity. Whilst FTAs and investment promotion could be used as a catalyst for firms to enhance productivity, other supporting factors are also needed.

# FDI Spillover Effects: Evidence from the Philippines

## ERIA Discussion Paper No. 437

Rafaelita M. Aldaba and Angel Derrickvhel Quejada

Using firm-level data in manufacturing, this chapter examines the impact of foreign direct investment (FDI) spillover effects on domestic firm performance. Through knowledge spillovers, FDI inflows affect the performance of domestic firms. Overall, there is some evidence to show that horizontal and forward spillovers from FDI have a significant positive impact on the performance of domestic firms. However, in terms of backward spillovers, the impact of FDI on the performance of domestic firms is negative and significant. The diffusion of backward spillover effects to domestic firms has remained limited due to the weak competitiveness of domestic firms and their inability to absorb the technology or knowledge being transferred.

To strengthen the absorptive capacity and productivity of domestic firms, the chapter suggests a more comprehensive approach that would combine industrial policy to improve and develop domestic parts and supplier firms with measures to create an environment conducive to the creation and expansion of FDI backward spillovers. These include upgrading industry participation towards higher segments of global value chains, innovation, human resource development, upskilling and reskilling the workforce, and liberalising ecozone regulations affecting the transactions between multinational corporations and companies outside the economic zones.

# The Story of RCEP: History, Negotiations, Structure, and Future Directions

ERIA Discussion Paper No. 438

Aladdin D. Rillo, Anna Maria Rosario D. Robeniol, and Salvador Buban

This paper is about the story of the Regional Comprehensive Economic Partnership (RCEP), including the history, dynamics of negotiations, and structure of this multilateral framework. Issues related to ASEAN centrality, sensitivities of negotiations, and other challenges are also highlighted and analysed. Nearly a decade in the making, RCEP represents a significant achievement for the region. As an ASEAN-led process, RCEP supports not only the region's market integration but as well as ASEAN's economic relations with the rest of the world, particularly with the 5 RCEP FTA Partners. Beyond the impact of RCEP in supporting the multilateral trading system, it is also intended to address the current challenges in the region, including the COVID-19 pandemic crisis. Thus, the narrative of RCEP provides a comprehensive overview of, and considers the potential implications for, trade in the region; for economic integration, and for the future of trade policy.

## Comparison of the Regional Comprehensive Economic Partnership (RCEP) and Other Free Trade Agreements (FTAs)

ERIA Discussion Paper No. 439

Innwon Park

This study evaluates the desirability of RCEP by comparing it with other mega-lateral FTAs. Evaluating the member-specific scale effects of the FTAs, we find that RCEP will generate significantly larger gains compared with the CPTPP. Evaluation of the provision-specific depth effects of RCEP suggests the possibility of positive gains but these gains may not be significant compared with those derived from the CPTPP. The existing CGE model analyses reveal that RCEP will generate greater gains than the CPTPP. RCEP will be more desirable for China, Japan, and the Republic of Korea and the estimated gains for ASEAN will notably increase as the model explicitly specifies the diagonal ROO cumulation scheme. Considering the sequence of implementing FTAs, we find that the CPTPP will generate greater gains for dual members, but the marginal gains enjoyed by RCEP members will not be substantial.

# The Post COVID-19 and RCEP: Pandemic Recovery in East Asia

## ERIA Discussion Paper No. 440

Shandre M. Thangavelu, Shujiro Urata, and Dionisius A. Narjoko

The paper examines the impact of the Regional Comprehensive Economic Partnership (RCEP) on the COVID-19 pandemic recovery of the East Asian countries. Recent studies highlight the positive gains from the RCEP agreement for all 15 of its member countries (Itakura, 2022, Petri and Plummer, 2020; Park, 2022). However, the recovery will be not even across East Asia. The East Asian countries of China, Japan, and the Republic of Korea (CJK) are likely to have the largest gains, as these countries dominate the regional global value chain (GVC) activities. The ASEAN least developed countries of Cambodia, the Lao People's Democratic Republic (Lao PDR), and Myanmar also experience positive gains from RCEP, but need to undertake deeper structural reforms to fully benefit from the agreement. The RCEP framework has elements that will be crucial for the post-pandemic recovery and regional transformation: (i) accelerating and enhancing GVC activities through the single rule-of-origin framework for the 15 RCEP member countries and CJK (China, Japan, and Korea) effects; (ii) services liberalisation and digital transformation in the key services trade of e-commerce, financial, professional, and telecommunications services; (iii) economic cooperation amongst the 15 RCEP member countries to address key contingency issues such as mass vaccination and health infrastructure, protocols for the movement of people, and trade capacity building for ASEAN least developed countries; and (iv) the 'living' nature of the RCEP agreement will be able to create a wider regional integration agenda to address key contemporary issues such as environment and climate change, skills development, green transformation, and developing digital and smart urban centres. ASEAN centrality, as highlighted by the RCEP framework, is critical for the post-pandemic recovery and structural transformation of the region.



# The Regional Comprehensive Economic Partnership Agreement and Europe: Impact and Implications

## ERIA Discussion Paper No. 441

Hanns Günther Hilpert

In the first 2 decades of the millennium, European Union (EU) trade policy underwent historic changes, amongst them an explicit pivot to Asia. Along with continued firm support of the rules-based World Trade Organization (WTO)-centred multilateral trading system, important new directions in the EU's trade policy included a turn to competitive bilateralism, a strong focus on values, an ambition to protect and to promote European trade standards as well as the politicisation of trade policy. Asia's outwards looking economic growth, the increasing trade interdependence in Asia as well as the various bilateral and multilateral trade agreements in the region, notably amongst them the Regional Comprehensive Economic Partnership (RCEP), attracted the EU's attention, and have helped cause and drive these changes. There was no particular Asian influence on the EU's own regionalisation, however. Meanwhile, trade and investment relations between Europe and Asia have intensified greatly over this period. But the EU has been slow and late to formulate a comprehensive strategy for the Indo-Pacific region. In spite of some notable successes, the EU's trade policy remains fragmented with differentiated approaches for each trading partner.

Opinions on the RCEP's relevance and importance for Europe are divided. RCEP sceptics point to the overall shallow nature of the agreement. RCEP optimists emphasise the future potential of trade and investment integration within the newly established RCEP economic area and warn of the discriminatory effects for Europe's economy and businesses. So, Europe's business will have to invest in the new RCEP free trade zone to overcome trade diversion risks and to benefit from the RCEP market integration. More worrying from Europe's perspective is RCEP's potentially negative policy impacts: a relative loss in the EU's trading power, the risk of Europe being sidelined in the make-up of future trade rules, and RCEP's future impact on rules based multilateralism and the WTO. The EU has various trade policy options with regard to the Indo-Pacific trade area and RCEP in particular. The most promising options include the conclusion of free trade agreements with as many RCEP member countries as possible, with the Association of Southeast Asian Nations as a group (as a region-to-region agreement), with other trading partners (from the Indo-Pacific or from other world regions), or with the Comprehensive and Progressive Agreement for Transpacific Partnership area.

## How Preferential are RCEP Tariffs?

### ERIA Discussion Paper No. 442

Kazunobu Hayakawa

This study discusses the extent to which the tariffs provided in the Regional Comprehensive Economic Partnership (RCEP) are preferential. RCEP does not necessarily adopt a common concession rule in tariffs, and the speed and depth of tariff reduction/elimination also differ by country. We show that RCEP tariffs become the best choice in trading some specific products with some specific countries in some specific years. Furthermore, there are some specific cases where the use of RCEP tariffs becomes beneficial even if RCEP tariffs are not lower. Therefore, we demonstrate that RCEP tariffs are beneficial in specific types of supply chains. In short, this study aims to enhance our comprehensive understanding of how preferential RCEP tariffs are compared with other types of available tariffs.

## Trade Facilitation in RCEP Countries

### ERIA Discussion Paper No. 444

Wenxiao Wang and Shandre M. Thangavelu

The trade facilitation under the Regional Comprehensive Economic Partnership (RCEP) is critical for regional trade and economic cooperation amongst the 15 member countries. This chapter examines the trade facilitation under RCEP using the available datasets on the trade facilitation index and compares the current trends in trade facilitation across RCEP countries in terms of four dimensions: the World Trade Organization's Trade Facilitation Agreement, digital trade streamlining, ease of doing business, and trade logistics performance. The study finds that RCEP countries have improved significantly in trade facilitation measures, but they vary across the countries. For example, China should further enhance its performance in cross-border paperless trade, whilst the Association of Southeast Asian Nations countries should improve their performance in the documentary compliance of trade, the infrastructure of trade, and trade logistics performance.

# Traditional Services Trade in the Regional Comprehensive Economic Partnership

ERIA Discussion Paper No. 445

Zhang Yan and Shandre M. Thangavelu

Traditional services trade (TST), including tourism and transport services, is the basic and key component of services trade in the Regional Comprehensive Economic Partnership (RCEP). The implementation of RCEP will provide a platform for further liberalisation in TST, thus effectively promoting the growth of the whole service trade and the development of the travel and transportation industry. In this paper we will first show the trade pattern of TST in RCEP. Then, the commitments by each RCEP member will be thoroughly analysed, and the Hoekman index will be constructed to measure the liberalisation levels for the RCEP members. In the last section, we outline some impacts of the COVID-19 pandemic on TST and propose policy implications for RCEP in the post pandemic era.

# The Investment Chapter in the Regional Comprehensive Economic Partnership: Enhanced Rules without Enforcement Mechanism

ERIA Discussion Paper No. 446

Henry Gao

This paper examines the legal rules in the investment chapter in the Regional Comprehensive Economic Partnership (RCEP). It starts with an overview and summary of the main provisions in the chapter, followed by an assessment of the rules by comparing established free trade agreements (FTAs), especially the Comprehensive and Progressive Trans-Pacific Partnership. In particular, it notes that the chapter, whilst largely following the established approaches to investment in other FTAs, also includes important twists to the common rules to favour the host states. The last part discusses the conspicuous absence of an investor-state dispute settlement mechanism, its pros and cons, and wider implications on regional integration, then concludes with some thoughts on future developments.

# Centrality and Community: ASEAN in the Regional Comprehensive Economic Partnership

ERIA Discussion Paper No. 447

Soo Yeon Kim

This paper examines the Association of Southeast Asian Nations' (ASEAN) role in the formation of the Regional Comprehensive Economic Partnership (RCEP) agreement. The RCEP project proceeded as trade governance has shifted from the multilateral trade regime under the World Trade Organization to free trade agreements and where the geopolitics of Asia has cast a shadow on the progress of regional integration efforts. The analysis in this paper focuses on ASEAN centrality, both as a concept and practice, in influencing the launch and progress of RCEP. Conceptually, ASEAN centrality is about the capacity of the 10-member group to help launch negotiations for the RCEP agreement and to shape its provisions for governing trade. In practice, the RCEP agreement consolidates and significantly unravels the numerous overlapping trade agreements between ASEAN, 38 in all between individual ASEAN members and its five RCEP partners, Australia, China, Japan, the Republic of Korea, and New Zealand. The paper also examines the relationship between the ASEAN Economic Community (AEC) and RCEP. RCEP provides for further tariff liberalisation between ASEAN members and its five RCEP partners and thus expands the zone of preferential treatment for goods exported from ASEAN and other RCEP members. RCEP also consolidates rules of origin requirements under one agreement, providing for diagonal cumulation and common rules of cumulation for agreement partners. The RCEP provisions can greatly facilitate production and trade along regional supply chains, thus accelerating the progress of the AEC as a single market and production base. Moving forwards, RCEP and ASEAN's place in it, is likely to be shaped by challenges and opportunities from the Comprehensive and Progressive Transpacific Partnership and the Biden administration's Indo-Pacific Economic Framework (IPEF) initiative. The ASEAN members with overlapping membership in the IPEF and RCEP will be pivotal in determining areas of cooperation. Regional integration will thus continue to be shaped by ASEAN centrality, and its progress will shape the ASEAN community.

# RCEP Services Liberalisation: Key Features and Implications

## ERIA Discussion Paper No. 450

Ramonette B. Serafica and Intan Murnira Ramli

The Trade in Services Chapter of the RCEP Agreement establishes the rules for the progressive liberalisation of trade in the region and sets out regulatory disciplines to mitigate barriers to competition. Considered the most significant feature of the RCEP agreement compared to other FTAs of ASEAN is the scheduling of market access commitments using the negative list approach. Thus, an immediate challenge for members that initially adopted the positive list is the transition to the negative list scheduling approach. Furthermore, members will need to implement competitive and robust regulations in liberalising services. Developing countries, especially LDCs, might also face capacity constraints to fully take advantage of the market access given by the RCEP partners.

# International Production Network in the Next Generation and the Role of RCEP

## ERIA Discussion Paper No. 452

Mitsuyo Ando, Fukunari Kimura, and Kenta Yamanouchi

This paper attempts to discuss the potential role of RCEP from the perspective of two kinds of international division of labor, i.e., machinery international production networks (IPNs) and digital-related services trade. To consider the possible contribution of RCEP to the widening and deepening of IPNs, we first provide an overview of machinery IPNs in ASEAN and East Asia by employing international trade data, a value-added based index for global value chain (GVC) activities using international input-output tables, and a gravity equation exercise. Then, we focus on trade in two global innovator services – information and communication technology (ICT) services and other business services exports – to foresee the future of the new international division of labour and highlights some policy issues. RCEP should be an evolving, living one. In terms of liberalisation and facilitation as well as international rule-making, which cover the whole region, RCEP is expected to revise and upgrade the contents to support the dynamic international division of labour in East Asia. At the same time, RCEP may play an important role in reducing policy risks due to ad hoc trade policies based on political intension and defending the rules-based trading regime for the regional economy.



# Potential Impact of RCEP and Structural Transformation on Cambodia

## ERIA Discussion Paper No. 453

Shandre M. Thangavelu, Vutha Hing, Ea Hai Khov, Bunroth Khong, and Seychanly Tith

This paper examines the potential impact of the Regional Comprehensive Economic Partnership (RCEP) on the Cambodian economy in terms of trade, output growth, and employment. It also provides quantitative (structural gravity model estimation and simulation) and qualitative trade policy evaluation in terms of exports, output, and the structural transformation of the economy in global and regional value chains. The results highlight the importance of RCEP for the pandemic and post-pandemic recovery and the structural transformation of the Cambodian economy. The paper also provides key policy recommendations to fully maximise the benefits of RCEP for Cambodia for inclusive and sustainable growth.

# The Implications of the Regional Comprehensive Economic Partnership (RCEP) for Asian Regional Architecture

## ERIA Discussion Paper No. 454

Shiro Armstrong and Peter Drysdale

East Asia's Regional Comprehensive Economic Partnership (RCEP) came into force in 2022 as the world's largest free trade agreement. RCEP was concluded, signed and brought into force in the face of major international uncertainty and is a significant boost to the global trading system. RCEP brings Australia, China, Japan, South Korea and New Zealand into the same agreement with the ten member ASEAN group at its centre. It keeps markets open and updates trade and investment rules in East Asia, a major centre of global economic activity, at a time of rising protectionism when the WTO itself is under threat. The agreement builds on ASEAN's free trade agreements and strengthens ASEAN centrality. One of the pillars of RCEP is an economic cooperation agenda which has its antecedents in ASEAN's approach to bringing along its least developed members and builds on the experience of capacity building in APEC and technical cooperation under the ASEAN Australia-New Zealand Free Trade Agreement. There is an opportunity to create a framework that facilitates deeper economic cooperation that involves experience-sharing, extending RCEP's rules and membership at the same time as strengthening political cooperation. The paper suggests some areas that might be best suited to cooperation – that is confidence and trust building instead of or before negotiation – and discusses how non-members such as India may be engaged and the membership expanded. Options such as multilateralising provisions and becoming a platform for policy convergence and coordinating unilateral reforms are canvassed.

# Restrictiveness of RCEP Rules of Origin: Implications for Global Value Chains in East Asia

ERIA Discussion Paper No. 455

Archanun Kohpaiboon and Juthathip Jongwanich

This paper aims to examine the restrictiveness of rules of origin (RoO) in the Regional Comprehensive Economic Partnership (RCEP) and other key multilateral free trade agreements (FTAs) in East Asia with a view to facilitating the operations of existing global value chains (GVCs). The analysis begins with dissecting PSRs in the RoO Chapter in these FTAs and quantifying them. The key finding is that product-specific rules in RCEP are the most flexible compared to the other multilateral FTAs and more facilitative to GVC operations. This is driven by RCEP-specific features, such as high intra-member trade and the member coverage. The main policy inference is that a full cumulation clause is needed in RCEP to allow a regional value content alternative to be in full effect. Harmonisation in RoO provision across these multilateral FTAs remains a challenge for ongoing negotiation. Monitoring the dynamics of RoO as well as the FTA utilisation is needed so that these multilateral FTAs could be a true stepping stone for trade liberalisation in the broader World Trade Organization multilateral trading system.

## RCEP and Modern Services

ERIA Discussion Paper No. 456

Christopher Findlay, Xianjia Ye, and Hein Roelfsema

In this paper, we start with an overview of trade flows in modern services within the Regional Comprehensive Economic Partnership (RCEP) region and identify the main challenges for policymaking that have emerged in the negotiations. To give this analysis a quantitative foundation, we use a general equilibrium Poisson pseudo-maximum likelihood analysis of the gravity model to cover several scenarios, including structural adjustments that could guide future cooperation in liberalisation and the development of modern services. We then show where the opportunities for further liberalisation lie within the framework of RCEP.

# Investment Liberalisation in East and Southeast Asia

ERIA Discussion Paper No. 457

Toshiyuki Matsuura

This paper presents the trends and patterns in the inflows and outflows of foreign direct investment (FDI) and reviews FDI liberalisation in East and Southeast Asia. We found that inward FDI has been significantly increasing in Singapore as well as in Cambodia, Lao People's Democratic Republic, Myanmar, and Viet Nam. Outward FDI has also been increasing in China and major Association of Southeast Asian Nations (ASEAN) countries. Moreover, intraregional FDI is increasing in East and Southeast Asia. Although there has been significant liberalisation of FDI in the region, restrictions remain, especially in the primary and tertiary sectors. The estimation results of the gravity model indicate that there is room for increasing FDI by means of investment liberalisation in the non-manufacturing in the ASEAN countries.

## Trade Remedies Chapter

ERIA Discussion Paper No. 458

Joseph Wira Koesnaidi and Yu Yessi Lesmana

The aim of this paper is to analyse the trade remedies chapter in the Regional Comprehensive Economic Partnership (RCEP) agreement. Based on the comprehensive analysis method, we break down each trade remedy instrument and compare it with the World Trade Organization (WTO) Agreement and other relevant regional trade agreements to review any distinct feature in the RCEP Trade Remedies Chapter. These features are important to assess, together with this chapter's consistency with WTO Agreement, to avoid the abuse of trade remedy instruments and to provide more legal certainty.

# Global Value Chain Indicators: A Survey and Application to RCEP

## ERIA Discussion Paper No. 460

Chandra T. Putra

This study follows and extends a survey by Amador and Cabral (2014) on global value chain (GVC) indicators and applies selected indicators to data from Regional Comprehensive Economic Partnership (RCEP) countries. The four methods of GVC measurement are product classification, trade processing, multicountry input output, and firm-level trade activity. Because of limitations in data availability and accessibility, product classification and trade processing methods seem to be unsuitable for RCEP application. There is a trade-off between the two more suitable methods. Multi-country input output has the ability to capture comprehensive forms of GVC trade and covers all sectors of the economy but has a quite aggregated sector code. On the other hand, the product classification method only indirectly captures GVC activity and has limited sectoral coverage but has disaggregated product-level data.

# Impacts of FDI Presence and Product Sophistication on the Demand for Skilled and Unskilled Labour: Evidence from SMEs in Viet Nam

## ERIA Discussion Paper No. 469

Quang Hoan Truong and Van Chung Dong

This study employs data from the Viet Nam Enterprise Survey (VES) for 2007 and 2011) to examine the effect of foreign direct investment (FDI) and product sophistication as well as the interaction between these two factors on the skilled and unskilled labour demand on Viet Nam's small and medium-sized enterprises (SMEs). It finds that the FDI presence in the same industry but different regions – and FDI in the same region but different industries – has a positive effect on the skilled labour demand and a negative impact on the unskilled labour demand. FDI in the same industry has a negative effect on the skilled labour demand and an advantageous impact on the unskilled labour demand. The product sophistication index is found to positively affect the skilled labour demand but decreases the demand for unskilled labour. When interacting with product sophistication, FDI presence in the same industry and region positively affects the skilled labour demand. The study also finds the opposite impacts of different types of FDI presence as well as the interaction between FDI presence and product sophistication on the demand for highly, medium-, and basic-skilled labour. Thus, it is important to consider the opposite effects of different types of FDI and the interaction between FDI presence and product sophistication on SME labour demand by skills level.

# 9

NINE



# CO-PUBLICATIONS

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# Sustainable Development Goals and Pandemic Planning: Role of Efficiency Based Regional Approaches

Edited by Venkatachalam Anbumozhi, Kaliappa Kalirajan, and Fukunari Kimura



This book assesses the progress in the implementation of Sustainable Development Goals (SDGs) in ASEAN, India, and China using the above framework conditions in the context with three main propositions. First, translating the SDGs into regional economic integration strategies during the pandemic recovery can enhance the link between global objectives and the multifaceted reality of an ASEAN community-building process, and providing a strategic option to strengthen the regional approaches. Secondly, a regional approach on complementarities to SDGs can facilitate the definition of relevant targets/indicators and enhance the monitoring and evaluation framework. In so doing it could also offer the scope to integrate more closely ASEAN community's social and environmental concerns into existing economic, social and political frameworks. Thirdly, focusing just on the geo-economic sphere – the area where south east and East Asian economic integration is relatively more advanced – will prove the hypothesis that effective regional integration through mega trade agreements such as the Regional Comprehensive Economic Partnership (RCEP) can support the Asia's transformation agenda and foster more inclusive and sustainable growth.

# Robots and AI: A New Economic Era

Edited by Lili Yan Ing and Gene M. Grossman



Robots and artificial intelligence (AI) are powerful forces that will likely have large impacts on the size, direction, and composition of international trade flows. This book discusses how industrial robots, automation, and AI affect international growth, trade, productivity, employment, wages, and welfare. The book explains new approaches on how robots and artificial intelligence affect the world economy by presenting detailed theoretical framework and country-specific as well as firm-product level-specific exercises.

This book will be a useful reference for those researching on robots, automation, AI and their economic impacts on trade, industry, and employment.

# Revisiting Electricity Market Reforms: Lessons for ASEAN and East Asia

Edited by Han Phoumin, Rabindra Nepal, Fukunari Kimura,  
Gazi Salah Uddin, and Farhad Taghizadeh-Hesary

This book combines the fundamentals of industrial organization theories based on microeconomic foundations, applied econometrics and environmental and natural resource economics in undertaking a comprehensive review of reforms of the power sector and its impact on industrial and socio-economic performance. The book provides the reader with the intellectual groundwork necessary for understanding the workings and interactions of today's reforming power markets such as in the ASEAN and East Asia that are striving to achieve the energy policy trilemma of affordability, energy sustainability and energy security. The topics addressed in this book include application of welfare theorems such as competition in and for the market in the electricity sector, market failures such as lack of electricity access, analysis of forecasting models under volatility, energy resource allocation such as renewable energy and competitive market designs of energy markets. Country-specific and region-specific case studies are used to analyze the progress and outcomes of market-driven electricity reforms across the reforming and advanced electricity markets. Therefore, the book derives policy lessons and provides policy recommendations in reforming power markets for the ASEAN and East Asia taking stock of more than three decades of global experience with power sector reforms. The electricity markets case studies are carefully chosen and supported by extensive data analyses as appropriate. This book on energy economics and policy is highly recommended to readers who seek an in-depth and up-to-date integrated overview about the evolving literature and status on electricity market reforms with a particular reference to Asia.



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