Unlocking the Potential of ASEAN-India Regional Value Chain (RVC) 4.0[1]

Dr Witada Anukoonwattaka [*]

1. Introduction

The rise of Globalization 4.0 marks a transformative shift in global trade, driven by the integration of digital technologies, services, and data into value chains. This new era emphasizes the critical importance of seamless connectivity, both physical and digital, as businesses increasingly rely on digital trade and intangible flows to sustain competitiveness in an interconnected world.

ASEAN and India are uniquely positioned to capitalize on this shift, given their growing economic significance and complementary strengths. However, their ability to fully integrate into digitally driven regional value chains (RVC 4.0) is constrained by challenges, such as regulatory fragmentation, varying levels of digital infrastructure readiness, and differing approaches to cross-border data governance. Addressing these challenges is crucial in realizing the potential of ASEAN-India economic cooperation in the global digital economy.

This paper explores the disparities in digital ecosystems and regulatory frameworks between ASEAN and India, highlighting the barriers to seamless integration. It also examines the evolving requirements for connectivity and the critical role of digital policies and standards in fostering collaboration. Through this analysis, the paper provides insights into the strategies required to overcome these barriers and unlock the opportunities presented by RVC 4.0.

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[1] The opinions and analyses presented in this document are solely those of the author and do not represent the official policies or positions of the United Nations or its affiliated entities.

[*] Dr. Witada Anukoonwattaka is an Economic Affairs Officer in the Trade Policy and Facilitation Section of the Trade, Investment and Innovation Division at the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). The author can be reached at anukoonwattaka@un.org .
Based on speech made at 8th AINTT roundtable held in Singapore

2. ASEAN-India Regional Value Chian (RVC) 4.0

The global transition to digital-driven value chains presents a unique opportunity for ASEAN and India to redefine their roles in regional and global trade. Historically, ASEAN's success in the manufacturing sector has been underpinned by its robust physical infrastructure, tariff reductions, and specialization in parts and components trade, making it a pivotal player in global supply chains. However, the evolving trade landscape requires ASEAN to integrate digital services—such as E-commerce, Cloud computing, Blockchain, Big data, and AI—into its manufacturing processes to remain competitive. India, on the other hand, has established itself as a global leader in information technology and digital services.

The complementary strengths of ASEAN and India offer a unique opportunity to develop digitally driven value chains (RVC 4.0). India's expertise in software development and cross-border IT solutions can augment ASEAN's manufacturing capabilities, driving innovation and efficiency in production systems. Similarly, ASEAN's established supply chain networks can provide a scalable platform for deploying India's digital innovations across the region. Joint efforts in these areas can significantly enhance productivity, expand market access, and strengthen regional economic integration.

Despite these synergies, competition between ASEAN and India presents an inevitable challenge in overlapping export markets. The emphasis on 'Make in India' could increase the potential for trade tensions. These dynamics underscore the need for a balanced approach to collaboration, allowing both regions to harness their strengths while mitigating actions that could undermine each other's economic interests.

3. The Changing Requirements for RVC 4.0

As the shift from traditional to digital-driven value chains accelerates, the connectivity required to support RVC 4.0 has evolved significantly. Unlike earlier phases of globalization, where the movement of goods defined trade dynamics, today's value chains are increasingly reliant on the seamless flow of intangibles—such as data, digital services, capital, and skills—that drive modern production and supply systems. For ASEAN and India, achieving meaningful integration in RVC 4.0 necessitates more than just physical connectivity; it demands robust digital connectivity that transcends borders and is aligned with the emerging requirements of global trade.

However, policy-induced barriers, such as digital trade restrictions, fragmented digital infrastructure, and regulatory divergence, pose significant challenges to the efficiency and competitiveness of digital value chains in the region. Table 1 highlights an example of policy divergence. It showcases the varying approaches adopted by India and ASEAN member states for cross-border data transfers. Within ASEAN itself, the absence of regulatory cohesion undermines interoperability and complicates efforts to establish seamless connectivity. At the same time, India's distinct and stringent data governance policies add another layer of complexity, further challenging the integration of ASEAN-India digitally driven value chains.
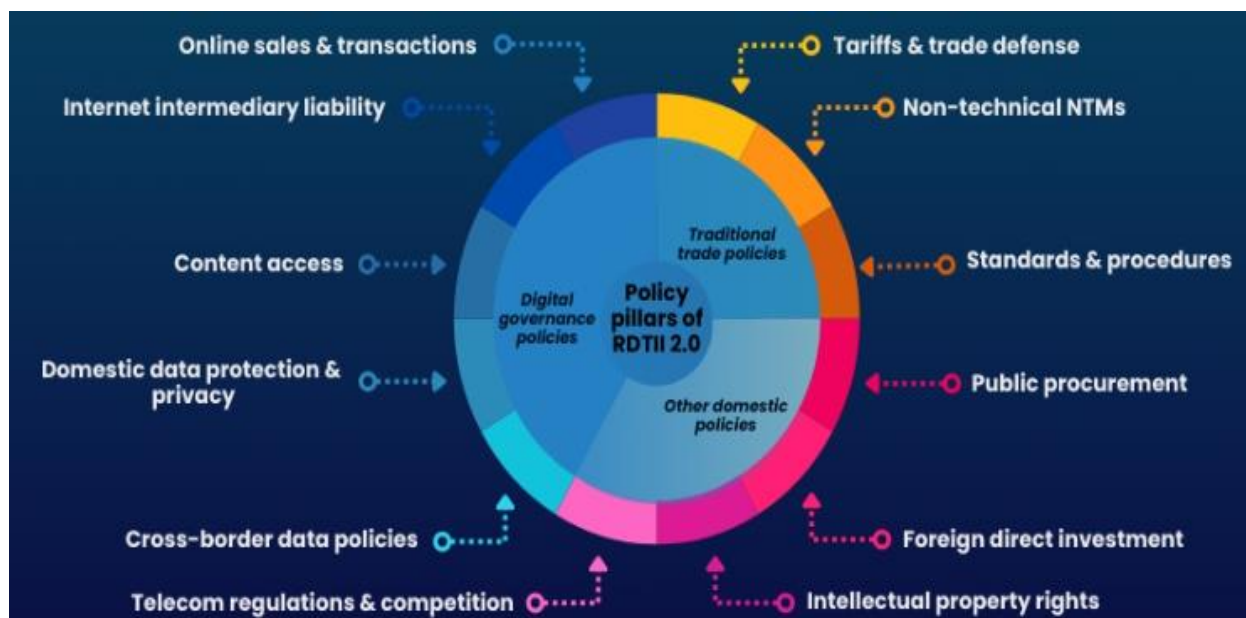
Table 1: Rule for Data Transfer in India and Selected ASEAN Countries

Country	Rule for data transfer
Malaysia	Whitelist; need permission if not listed.
Thailand, Philippines	Case-by-case approval; need consent or agreements.
Indonesia	Government approval required
Viet Nam	Special permission needed
Singapore	Similar laws or contracts needed
India	Blacklist; sector-specific data localization

Source: Author, based on data from ESCAP database for Regional Digital Trade Integration Index (RDTII), https://www.unescap.org/projects/rcdtra/databases-kp).

In addition to the example of policy divergence in cross-border data transfer rules, there are numerous other regulatory and infrastructure concerns that must be addressed to support digitally driven value chains. These challenges are comprehensively captured in the Regional Digital Trade Integration Index (RDTII) framework, jointly utilized by United Nations ESCAP, ECA, and ECLAC for analyzing digital economy integration policies. The RDTII framework, as illustrated in Figure 1, highlights critical policy pillars such as tariffs and trade defense, intellectual property rights, domestic data protection and privacy, telecom regulations, cross-border data policies, and non-technical non-tariff measures (NTMs).

Figure 1: ESCAP-ECA-ECLAC Regional Digital Trade Integration Index (RDTII) Framework
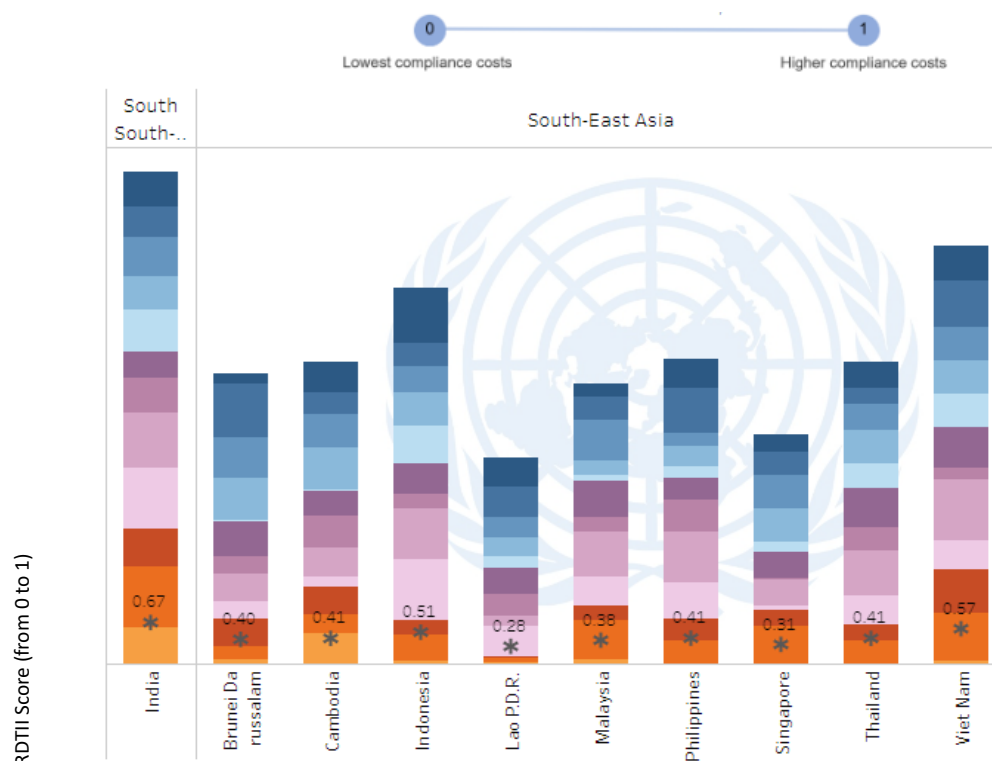

Note: For details, please see https://www.unescap.org/projects/rcdtra

4. Regulatory Divergence in ASEAN and India

ESCAP research based on the RDTII framework reveals significant regulatory divergence across ASEAN countries, despite ongoing efforts to harmonize digital trade policies. Notable variations exist within ASEAN's regulatory ecosystems and between ASEAN and India (Figure 2):

- **ASEAN Variations**: ASEAN countries, such as Singapore, demonstrate relatively lower compliance burden due to streamlined regulatory environment. Conversely, businesses in countries such as Viet Nam and Indonesia face higher compliance costs. Lao P.D.R. shows lower compliance costs than several ASEAN economies with complex regulatory frameworks

- **India's Regulatory Landscape**: India's compliance costs are relatively higher than ASEAN average across key policy pillars such as domestic data protection, telecom regulations, and cross-border data flows (Figure 3). These stringent regulations exacerbate challenges for ASEAN-India digital trade integration.

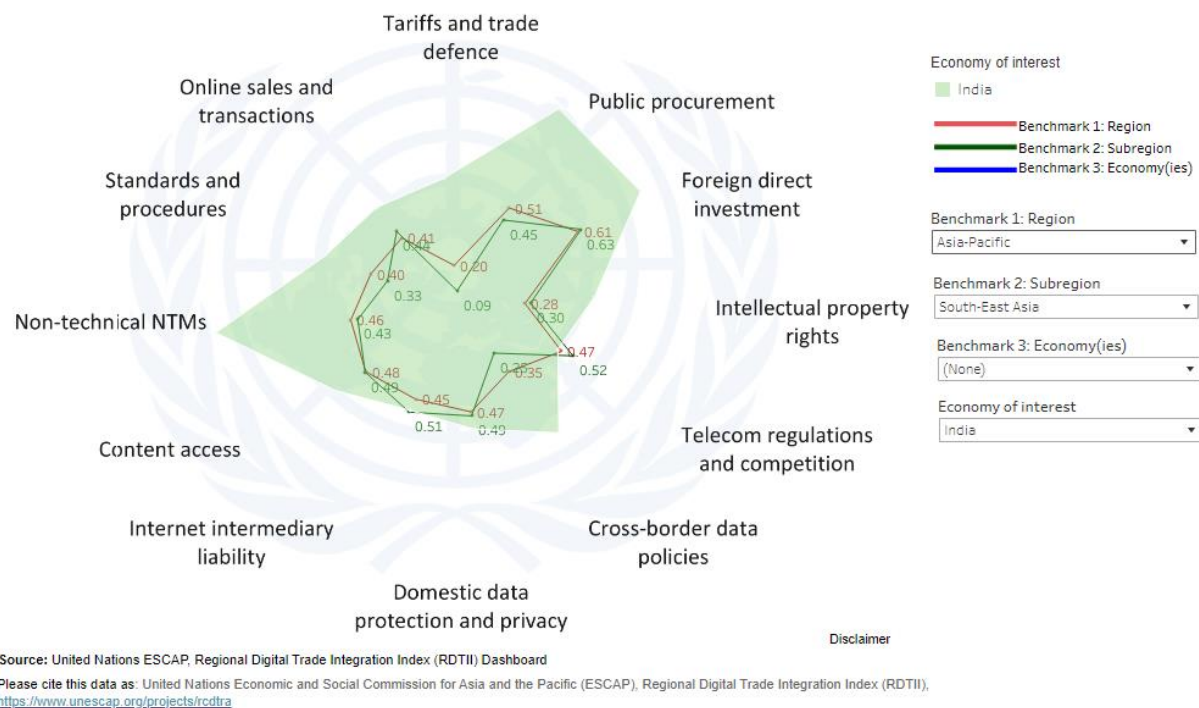## Figure 2: Complexity in Digital Trade Ecosystem Across ASEAN and India

Source: United Nations ESCAP, Regional Digital Trade Integration Index (RDTII) Dashboard

Please cite this data as: United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Regional Digital Trade Integration Index (RDTII) https://www.unescap.org/projects/rcdtra

Figure 3: Regulatory Compliance Cost: India vs. ASEAN Average

Source: United Nations ESCAP, Regional Digital Trade Integration Index (RDTII) Dashboard
Please cite this data as: United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Regional Digital Trade Integration Index (RDTII), https://www.unescap.org/projects/rcdtra

5. Conclusion and Recommendations

ASEAN and India are at a pivotal point to lead the transition into Globalization 4.0 by capitalizing on their strengths in manufacturing and digital services. However, India's complex regulatory environment, combined with ASEAN's internal diversity, presents a dual challenge. For ASEAN, addressing internal fragmentation through the development of a unified regulatory framework is essential to foster regional interoperability. For India, substantial efforts are needed to align with ASEAN's policies to facilitate smoother integration into digitally driven value chains.

To achieve seamless integration into digitally driven value chains, ASEAN and India must tackle three primary challenges:

- **Regulatory Complexity**: India's stringent policies, combined with ASEAN's fragmented regulatory landscape, create obstacles to efficient and seamless digital trade. Streamlining these frameworks is critical for facilitating smoother business operations.
- **Compliance Costs**: High compliance costs in India and ASEAN's regulatory inconsistencies disproportionately impact small and medium enterprises (SMEs), limiting their participation in RVC 4.0. Policy alignment is essential to reduce these costs and promote inclusivity in RVC.

- **Interoperability Gaps**: Diverse legal and technical standards hinder cross-border data flows and digital trade integration. Establishing mutually recognized and interoperable systems is crucial for improving efficiency and connectivity of RVC 4.0.

Strategic Priorities for ASEAN-India Cooperation

Overcoming these obstacles through coordinated digital policy cooperation is essential for unlocking the full potential of RVC 4.0. Such efforts will not only enhance ASEAN-India economic integration but also position both as leaders in the evolving global digital economy.

To achieve effective ASEAN-India cooperation in Globalization 4.0, both regions must focus on the following interlinked strategies:

- **Regulatory Harmonization**: Align data governance frameworks, including cross-border data transfer rules, privacy regulations, and cybersecurity standards, to enable smoother connectivity. The regulatory divergence within ASEAN and India's strict localization requirements highlights the need for mutual recognition and standardization.
- **Infrastructure Development**: Invest in digital infrastructure to facilitate seamless data sharing and integration. Collaborative development of platforms for digital payments, e-commerce, cloud, and cybersecurity will enhance efficiency, inclusivity, and interoperability of digital economy across ASEAN and India.
- **Simplify regulations:** Reduce compliance costs for businesses, particularly SMEs. Streamlined policies will create a more conducive environment for cross-border trade.

Policy Coordination and Regional Collaboration

All these cannot be achieved without Policy Coordination. Recommended actions include:

- **Aligning Rules and Standards:** A key step in addressing these challenges is harmonizing rules, standards, and legal requirements in digital trade. Establishing mutually recognized and interoperable systems will help businesses in ASEAN and India overcome technical and regulatory barriers, fostering deeper integration into global value chains.
- **Utilizing Joint Mechanisms:** Collaborative mechanisms are essential to address fragmented digital policies and strengthen regional cooperation. Policy-analytical tools, such as the Regional Digital Trade Integration Index (RDTII), can help identify policy gaps and track progress toward integration.
- **Adopting Regional Frameworks:** Leveraging Asia-Pacific-wide frameworks, such as the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific (CPTA), to align legal requirements. The CPTA provides a foundation for harmonizing digital trade procedures, promoting electronic documentation, and creating shared standards for paperless trade. These efforts will help streamline customs processes, reduce delays, and foster a more efficient trade environment within regional value chains.

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About AIC

Considering the work of the ASEAN-India Eminent Persons Group (AIEPG), and its Report with recommendations for forging a closer partnership for peace, progress and shared prosperity, the Heads of the State/Government of ASEAN and India at the ASEAN-India Commemorative Summit 2012, held at New Delhi on 19-20 December 2012, recommended the establishment of ASEAN-India Centre (AIC), which was formally inaugurated by the Hon'ble External Affairs Minister of the Government of India on 21 June 2013 at RIS. AIC serves as a resource centre for ASEAN Member States and India to fill the knowledge gaps that currently limit the opportunities for cooperation. AIC works with the Ministry of External Affairs (MEA), Government of India and undertakes evidence-based policy research and provide policy recommendations.

AIC Commentary Series Editor: Dr Pankaj Vashisht, AIC at RIS, New Delhi

Contact us at:
ASEAN-India Centre (AIC)
Research and Information System of Developing Countries (RIS)
Zone-IV-B, Fourth Floor, India Habitat Centre, Lodhi Road
New Delhi – 110003, India
Tel. +91-11-24682177-80
Fax: +91-11-24682173-74
E-mail: aic@ris.org.in
Visit our website at: http://aic.ris.org.in

@AIC_aseanindia