1. Introduction

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The Association of Southeast Asian Nations (ASEAN) has been working on digital transformation for more than 25 years – since 1997 – when it adopted ASEAN Vision 2020. This vision called for the formation of an ASEAN community and launched an initiative on information and communication technology (ICT) development within the region. In 2000, the *e-ASEAN Framework Agreement* was signed by ASEAN leaders, and various other initiatives have been undertaken to promote digitalisation within ASEAN (ASEAN, 2021e).

Southeast Asia is indeed experiencing accelerated adoption of digital technologies, supported by a young and technologically receptive population of 680 million people, more than half of whom are under the age of 30 years. The number of internet users in ASEAN increased by 100 million in 4 years from 260 million in 2015, with another 100 million added since 2019, reaching a total of 460 million in 2022 (Google, Temasek, Bain & Company, 2022).

Messaging, social-networking services, ridesharing, and delivery of goods via mobile apps are used daily. Online shopping has become a habit, especially since the COVID-19 pandemic, transforming the retail sector from brick-and-mortar shops. The gross merchandise value of the digital economy in Southeast Asia was close to $200 billion in 2022, representing a twofold increase from 2019 (Google, Temasek, Bain & Company, 2022). The impact of the digital revolution goes beyond social networking, online business, and mobile apps. Digital technologies are transforming all sectors (World Bank, 2019).

However, Tran, Phan, and Nguyen (2022) indicated that the gap amongst ASEAN Member States (AMS) is still large in terms of readiness for the digital economy. For example, according to the Network Readiness Index 2022, Singapore ranked 2 out of 131 countries worldwide – yet the Lao People's Democratic Republic (Lao PDR) ranked 102 and Cambodia 104.[1] Tong, Li, and Kong (2021) also emphasised that simultaneous growth in the regional integration of the digital economy cannot be assumed due to considerable gaps amongst AMS that now exist.

To understand ASEAN's digital integration and its evolution, this book analyses more than 70 agreements, master plans, frameworks, action plans, and related declarations by ASEAN. By looking at the objectives of each document, its scope, nature of actions, and relationship to other documents, it seeks to clarify how ASEAN's digital integration has been shaped over the past 20 years.

ASEAN's digital integration has been characterised by its scope and flexibility. It has gone beyond policy harmonisation amongst AMS to facilitate trade and investment in ICT products and digital services – similar to how economic integration in ASEAN has encompassed more than liberalisation and facilitation of goods, services, and investment. Digital integration is characterised by the inclusion of ICT infrastructure

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[1] Brunei Darussalam and Myanmar are not ranked.

development, promotion of digital transformation, cybersecurity cooperation, institutional building support for AMS, digital education, and digital human resources development. It is noteworthy that it comprises transactions between countries as well as domestic measures (e.g. expanding broadband access to underserved rural areas).

The documents issued by ASEAN comprise some agreements and protocols that require signatures or ratification procedures as well as several framework documents, which are not legally binding and do not require signatures or ratification procedures. ASEAN and AMS have considered the needs and concerns of all AMS with different levels of development, infrastructure, and regulatory frameworks. For some AMS, capacity building through technical and legal assistance has been a key action. These capacity-building efforts were provided not only within the ASEAN region, but also through cooperation with dialogue partners. Inclusiveness has been a focus not only for AMS but also for micro, small, and medium-sized enterprises (MSMEs) that are still lagging behind in terms of digitalisation compared to other key economic players such as large firms and companies based in urban areas (ERIA, 2019).

Over time, new challenges have led to a wider range of initiatives and more concrete actions. The scope has been expanded to include personal data protection, paperless trade, digital payments, and digitisation of traditional sectors. Initiatives that were previously treated as separate initiatives of ASEAN are now counted as digital integration initiatives. This means that ASEAN has responded to the evolution and diffusion of technology and extended its notion of digital integration. This change has been particularly evident since 2016 and has evolved in response to the pandemic. Digital integration is driving the adoption of emerging technologies, such as 5G, cloud, artificial intelligence (AI), big data, and internet of things (IoT), and is addressing increasingly complex issues regarding cybersecurity, consumer protection, and cross-border data flows.

Scholarly works have evaluated ASEAN's digital integration to varying degrees. Corning (2022) examined how the complexity and fragmentation of digital trade governance shaped the digital trade strategies of AMS and how these strategies, in turn, shaped digital governance in the region. Mirakyan (2021) analysed the digitalisation processes in ASEAN, determined the strategy for integration, and provided relevant dynamics of digitalisation-level indicators. Khan et al. (2020) evaluated AMS attraction to digitalisation through their speedy development, which means that the region is now home to some of the most competitive digital economies. Kusumastuti and Nuryani (2020) examined the digital literacy levels amongst AMS, how their awareness of this aspect emerged, and their causes. Intentilia, Haes, and Suardana (2022) provided an overview of utilising digital platforms for diplomacy in ASEAN.

The following are the research questions addressed in this book.
What is the history of ASEAN efforts in the digital sector? Chapter 3 outlines how the digital sector has been addressed since the ASEAN Vision 2020 in 1997, which proposed the formation of the ASEAN Community. ASEAN's history of digital sector initiatives shows how it has responded as a region to the growing importance of the digital economy, making it an important element in the regional integration process. By tracing the evolution of ASEAN policies and initiatives related to the digital sector and digital economy, this book argues that ASEAN has grasped the characteristics of digital integration and its impact on society, broadened its scope, and concretised its actions. It should be further emphasised that ASEAN's digital integration does not simply mean trade and e-commerce integration; it includes, for example, public sector digitalisation, education services, and digital innovation.

How have the key initiatives of digital integration in ASEAN evolved? In Chapter 4, the ASEAN Single Window (ASW), e-authentication and digital identity, ASEAN Computer Emergency Response Team (CERT), e-payment and QR codes, and the digitisation of ASEAN MSMEs are taken as examples of how ASEAN has extended the notion of digital integration and has concretised and progressed individual actions within the initiatives. In Chapter 5, it also describes the progress of ASEAN initiatives and their relationship with national initiatives in regard to the ASW and how they have led to significant effects in practice.

What are the relationships and differences between the five comprehensive framework documents adopted during 2019–2021? After the *ASEAN Digital Integration Framework Action Plan (DIFAP) 2019–2025* (ASEAN, 2019b), a series of framework documents were adopted: the *ASEAN Comprehensive Recovery Framework* (ACRF) (ASEAN, 2020a), *ASEAN Digital Masterplan 2025* (ADM) (ASEAN, 2021b), *Bandar Seri Begawan Roadmap: An AEAN Digital Transformation Strategy to Accelerate ASEAN's Economic Recovery and Digital Economy Integration* (BSBR) (ASEAN, 2021c), and *Work Plan on the Implementation of ASEAN Agreement on Electronic Commerce* (*Work Plan for AAEC*) (ASEAN, 2021f). They were issued to minimise the negative impact of the COVID-19 pandemic and to further boost digitisation, which has accelerated as a side effect of the pandemic. To understand the relationship of these five frameworks, an integrated comparison table of actions is developed and analysed.

What are the prospects of the *ASEAN Digital Economy Framework Agreement* (DEFA) and ASEAN Post-2025 Agenda? It is important to discuss the prospects of the DEFA and Post-2025 Agenda, as they have the impetus to accelerate the digital integration process. Chapter 5 examines e-invoicing, competition policy, submarine cables, data localisation, data innovation, open government, source code, digital identities, AI, and FinTech. Existing literature has suggested that these and other new areas be discussed in DEFA, but what we have found is that these areas are not entirely new to ASEAN and have been discussed in various framework documents. The book also discusses what ASEAN needs to focus on post-2025: strengthening coordination capacities, promoting infrastructure development, and acknowledging the importance and difficulties of translating framework development into practical effects.

Chapter 2 outlines reasons why digital integration is important in ASEAN, defines the digital economy and digital integration, and presents the analytical framework of this book. Chapter 3 outlines the history of ASEAN's digital initiatives. Chapter 4 describes the key actions and shows how those actions have evolved. Chapter 5 discusses DEFA and the outlook beyond 2025. The final chapter provides conclusions and key policy recommendations and discusses the limitations of this analysis.