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**LINKING DIGITAL TRAJECTORIES:  
ASIA AND EUROPE'S  
DIGITAL FUTURES**

## ABSTRACT

This AESCON Policy Brief surveys and maps the digital economy opportunities that exist for European countries in Asia and vice versa. Despite market access constraints, divergent digital laws and regulations, and varying industrial structures, European regulators, companies and venture capital firms (VCs) can propel Asia's digitalizing spree, particularly in areas like e-commerce and fintech, through investments, sharing regulatory experiences and technical know-how. Likewise, Asian firms and VCs can advance Europe's digital innovation and industrial transformation by exploiting and filling investment gaps in areas such as climate change, urbanization and health care. Asian and European countries can work closely to erect and sustain a hospitable regulatory framework to support digital interoperability and eliminate potential frictions.

## INTRODUCTION

The European Union (EU) and its partners in Asia have a deep stake and interest in advancing Asia's digital trajectory. Opportunities exist for European technology firms and funds to deploy capital in Asian unicorns and start-ups looking to scale their operations, recruit sufficient talent and internationalize their services. With Europe's start-up environment maturing, venture capital firms and funds in Berlin, Stockholm, Munich, Tallinn and Madrid can venture outwards and inject capital within Asia's entrepreneurial digital ecosystems, which are increasingly interconnected with Europe.<sup>1</sup>

Besides European financing, Asian start-ups and unicorns could benefit from European business strate-

gy, operational expertise, research and development (R&D) practices and talent management approaches. Similarly, European investors could benefit from Asian technology firms in terms of business strategy and absorbing and leveraging capital to build digital services for large European markets. With technologies like artificial intelligence (AI) and quantum computing seeping into our lives and economies, regulators across Asia and Europe can also share and exchange ideas on how to balance innovation with regulation to foster long-term competitiveness.

This AESCON Policy Brief will cover opportunities for both European and Asian countries on the digital economy front. It also offers recommendations arising from the discussions held at the session on 'Opportunities in the digital economy' at the 2nd edition of the Asia-Europe Sustainable Connectivity Conference (AESCON).<sup>2</sup>

The policy brief begins by underlining recent digital economy trends in Asia and Europe, covering digital payments, regulations and the ongoing shift towards a decentralized internet. Next, the policy brief outlines which sectors offer investment opportunities for European firms in Asia. Specifically, it unpacks three areas: the rise of 'branded' e-commerce platforms; business-to-customer (B2C) and small and medium-sized enterprises (SME) workflow digitization; and the proliferation of digital credit platforms to support B2C players and SMEs. The policy brief then describes how Asian VC funds, mainly Japanese, are impacting Europe's digital innovation by investing in tech firms and unicorns working in critical areas like climate change, urbanization, health and digital identity. The policy brief ends by considering how to deepen Europe-Asia digital economy cooperation, given the prevailing trends.

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- 1 A unicorn generally refers to a startup firm that has a value of over (US) \$1 billion. [https://resources.oxfordeconomics.com/hubfs/London\\_is\\_Europes\\_top\\_Tech\\_City\\_But\\_few\\_things\\_last\\_forever.pdf](https://resources.oxfordeconomics.com/hubfs/London_is_Europes_top_Tech_City_But_few_things_last_forever.pdf)
  - 2 AESCON was funded by the European Union, supported by the Asia-Europe Meeting, and organized by a consortium of think tanks in Europe and Asia, consisting of the Clingendael Institute (The Hague), the Kosciuszko Institute (Kraków), Carnegie India (New Delhi), GIZ (Bonn) and the Institute for Asian Studies (ISAS/NUS, Singapore). For details about the conference and videos of the various panel discussions, see [www.aecon.org](http://www.aecon.org).



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## DIGITAL ECONOMY TRENDS IN ASIA AND EUROPE

Actionable steps:

- ▶ Despite strong digital economic growth across Asia, particularly in sectors like finance, health and retail, Asian countries and external partners like the European Union should redouble efforts to ease constraints to continued digitalization such as limited broadband infrastructures, lagging digital skills and literacy, and ineffective digital laws and regulations.
- ▶ Europe's ongoing digital decentralization must possess and include space and pathways for collaboration with Asian firms, particularly in areas like fintech and retail.

The digital economy refers to economic activities that use digital information to drive the production of goods and services. For instance, the internet, big data, cloud computing services and related digital technologies can collect, share, store and analyse digital information and leverage them to create new applications and services. Digitization creates benefits and efficiencies, as various digital tools and technologies fuel innovation, create job opportunities and drive economic growth. The digital economy is a major driver of global economic growth. Asia accounted for nearly 50 per cent of global digital revenues in 2020.<sup>3</sup>

Digital trade forms one aspect of e-commerce, covering both domestic and cross-border e-commerce. The Covid-19 pandemic has accelerated digital adoption across South and South-East Asia, with the digital economy poised to play a bigger role in driving the region's economic future. Three sectors – health, education and financial technologies – are thriving because of the pandemic, as consumers seek more convenient and accessible digital solutions. For example, the rise of digital payments, alongside increasing broadband access, has dramatically increased digital consumption; at the same time, underpinned by strong e-commerce growth, fintech services that support re-

mittances, digital lending, insurance and investments are flourishing. These sectors could become a significant part of Asia's booming digital economy by 2030, alongside other sectors such as digital media, travel, health and transportation.

Recent online retail sales for 2021 and forecasts for 2026 indicate that e-commerce growth will rise over the next decade. In fact, digital technologies like AI, big data, the Internet of Things (IoT) and 3D printing could further increase trade by the Association of South-East Asian Nations (ASEAN) by 2.5 per cent per year, or 'about 23 per cent' from 2022 to 2030.<sup>4</sup> A big reason for this surge has been the increase of internet users in ASEAN, which now stands at 400 million with mobile penetration now 132 per cent of the total population.<sup>5</sup> Indonesia will likely remain the largest e-commerce player and market, alongside Vietnam, the Philippines and Malaysia. That said, several challenges exist for Asian economies to harness the potential of digital technologies as they pursue growth and innovation. These challenges include building out broadband infrastructure, expanding the uptake of digital technologies across sectors, industries and firms, cultivating skills among their populations to absorb technologies and, critically, supportive regulatory policies and initiatives to enable fast-paced digital adoption.

Digital trends in Europe, on the other hand, are tilting towards more regulation and decentralization.<sup>6</sup> Decentralization means transferring control and decision-making from one entity, organization or firm to networks that could deter their ability to gain leverage and assert control over one another. Decentralization has a strong political tenor given the growing dominance of big-tech platforms that act as gatekeepers, amassing and leveraging consumers' data. Platforms have accumulated incredible power to influence politics and societal trends. The bevy of Europe's digital legislative proposals are designed to establish clear rules that govern how platforms operate, deal with and handle personal data, and mitigate their harmful

effects while protecting individual privacy.

This new era of 'data sovereignty' presages a landscape that has very practical implications for governments, businesses and consumers.<sup>7</sup> European officials have realized the importance of building the non-physical digital infrastructures to support the digital economy's growth while protecting privacy and user rights. Europe's digital future could be more decentralized and better regulated, which also potentially enables interoperability between platforms to prevent singular platforms from controlling data. Web 3.0 could shift the power that certain large platforms have *vis-à-vis* data.<sup>8</sup> In all likelihood, Web 3.0 will be catalysed by decentralized data networks and AI's machine-learning capabilities to make websites, applications and related digital services more intelligent, highly connected, frictionless and open.

Decentralization could stimulate collaboration between countries and economies, especially those that are digitizing fast. For instance, decentralized finance (DeFi) is altering global finance, giving banks stiff competition in allocating finance. DeFi includes financial products and services that are generally open and not governed by centralized authorities that can ostensibly block payments or deny access. Crypto-currencies are being used and experimented with as financial instruments. Greater scope for collaboration exists at international organizations such as the World Trade Organization (WTO) and bilaterally through trade mechanisms like the newly formed India-EU Trade and Technology Council, particularly when it comes to data, to ensure high levels of protection and exchange with sufficient safeguards.

## DIGITAL ECONOMY OPPORTUNITIES

Actionable steps:

- ▶ European firms and investors must focus their attention on Asia's branded digital marketplaces, where SMEs connect with customers, sell their goods, and expand their operations and market share.
- ▶ External investments can help to scale digital tools

## FOCUS - MALAYSIA

*In ASEAN, Malaysia's digital economic journey has been noteworthy and significant. Since 1996, the government has had a longstanding commitment toward developing and harnessing digital technologies to boost growth. A clear focus has been given to building a knowledge-based economy and society and to catalyse information and communication technologies (ICTs) to that end. Initiatives like the Malaysia Digital Economy Corporation (MDEC), National Broadband Initiative, National ECommerce Strategic Roadmap and the Malaysia Productivity Blueprint have enabled small, medium, and large enterprises to support digitalization.*

*Of late, the government also has established policies to exploit the potentials of domestic broadband services and related digital infrastructures to accelerate digital economic shifts. Through Malaysia's digital economy blueprint and the 4IR policy (4th Industrial revolution), launched in 2021, growing coverage, accessibility, and quality of digital services and technologies stand to unleash unrealized potentials of digitalization in Malaysia. Challenges, however, do exist. The aim of these two flagship initiatives is to position Malaysia as a digital leader in Southeast Asia and nurture an integrated ecosystem that allows citizens, businesses, and governments to collaborate digitally to advance incumbent objectives.*

*Like other countries in South and Southeast Asia, Malaysia's digital transformation could be marred by certain conditions - digital divide, particularly between various income groups and genders in terms of digital access and adoption; prevailing concerns around cybersecurity given growing nefarious cyber incidents and crime; the need to bolster digital infrastructures, especially broadband, to further increase access; and building trust amongst citizens and government when it comes to technological use and adoption. The end goal is to make Malaysia a 'digitally driven, high income-nation, and a regional leader in the digital economy'.*

3 [https://unctad.org/system/files/official-document/der2021\\_en.pdf](https://unctad.org/system/files/official-document/der2021_en.pdf)

4 <https://www.iseas.edu.sg/articles-commentaries/iseas-perspective/2021-147-digital-trade-in-southeast-asia-measurements-and-policy-directions-by-cassey-lee/>

5 <https://aseanup.com/southeast-asia-digital-social-mobile/>

6 [https://www.eumonitor.eu/9353000/1/f4nvhdhcs8bljza\\_j9vwik7m1c3gyxp/vkp1fargymox](https://www.eumonitor.eu/9353000/1/f4nvhdhcs8bljza_j9vwik7m1c3gyxp/vkp1fargymox)

7 <https://digital-strategy.ec.europa.eu/en/policies/strategy-data>

8 <https://medium.com/fabric-ventures/what-is-web-3-0-why-it-matters-934eb07f3d2b>

and applications that help to simplify work processes, expand credit pathways and reach customers for SMEs across Asia.

Digital economy market opportunities abound across Asia. Covid-19 has turbocharged digital adoption across Asia for most e-commerce platforms, generating a tremendous uptick in digital demand. Moreover, Asia's digital economic growth is not limited to China, India, Japan and South Korea, which have the largest shares of e-commerce sales; other Asian countries, including Indonesia and Vietnam, are experiencing rapid e-commerce growth supported by digital payments and retail. Various regional VC funds, including Saison Capital (Singapore) and Qualgro (Singapore) are now investing heavily and proactively to propel this digital transformation.

Fundamentally, Asia's digital economy opportunities are driven by existing gaps. Digitalization is uneven across industries and sectors. Specifically, Asia's SMEs confront pronounced barriers as far as access to and the adoption of digital technologies are concerned. These hurdles prevent SMEs from entering and fully participating in the digital economy and exploiting existing opportunities. As a result, VCs and investors are focused on three areas that reflect changes and gaps in Asia's digital economy where there is scope for investment and innovation, particularly from external investors, to solve tangible problems through investments:

- (1) the success of 'branded' e-commerce spaces;
- (2) the transformation of B2C and SME workflow digitization;
- (3) digital credit options for B2C and SMEs.

### 1. Branded e-commerce domains

Digital intermediation has changed how companies approach brand-building. The rise of e-commerce and direct-to-customer (D2C) models has created opportunities for building links between businesses and users. What matters here is the branding of the marketplace platform such as Lazada or Shopee (two popular e-commerce platforms in South-East Asia), which enables customers to establish direct relation-

ships with platforms, not individual sellers. Related to the branding of marketplaces is the branding of products themselves, which is more evident in India when compared to South-East Asia. E-commerce now involves large, unorganized, unbranded categories of goods and services that benefit from the emergence of digital B2C players. B2C e-commerce relies on digital platforms that connect suppliers – large and small – to customers across countries. These platforms connect and enable buyers and sellers to find each other, using algorithms and advertising; they also provide facilities and tools for buyers and sellers to sign purchase agreements; and payment engines and delivery systems complete transactions. Both established and unestablished goods and services have the potential to use digital applications including payments, advertising and methods to reach consumers directly. The emergence of B2C platforms could accelerate cross-border trade in goods and services, potentially across regions. Buyers can reach sellers on these platforms to sign contracts, make payments and render services. Moreover, the presence of digital wallets allows for such transactions to occur as payment mechanisms become compatible.

### 2. B2C and SME workflow digitization

Until now, most SME work-management processes across South and South-East Asia have not been digitized. They remain inefficient because of poor internet infrastructures, lack of requisite digital skills, funding and related policy gaps. Such problems become more acute for SMEs located in rural areas, far from metropolitan cities and towns, since these enterprises typically do not possess the required digital and financial literacy, with limited access to broadband. There is an ongoing revolution when it comes to digitizing workflows, as SMEs across South and South-East Asia (kirana, or 'mom and pop' stores) utilize digital tools to improve their business operations and gain a robust online presence. For example, in India, the United Payments Interface (UPI) allows firms and businesses to transact with one another. Pakistan has also been making tremendous digital strides, particularly in fintech.<sup>9</sup> Pakistan's emergence as an attractive fintech market is driven by talent that has drawn capital to fill

its growing market needs.<sup>10</sup> The Pakistani government has supported this fintech drive by providing new entrants and applications with digital payment licences, giving them the power to build new payment rails that allow users to make financial transactions digitally – to transfer money, pay bills, make personal transfers, purchase insurance, and invest in funds and stocks.

### 3. Access to credit

The third trend is the opening of new finance or fintech pathways for unbanked and underbanked Asian consumers. Broadly, the SME fintech space represents an untapped trillion-dollar market opportunity that could unlock benefits for a largely underbanked segment across Asia. Historically, fintech innovation has lagged among SMEs because banks did not find it profitable to serve their needs, given regulatory constraints and the ostensible lack of credit-worthiness of potential clients.

Existing and upcoming fintech applications, however, allow SMEs to access credit for various purposes. These applications also enable users to overcome existing institutional bottlenecks, such as identification or verification that hinder their ability to access and use credit. Firms do not necessarily enter the space to provide credit, but they often nest credit or financial functions within a broader digital platform or application. Consumers are thus able to access credit as they transact for other commercial or personal purposes on these applications and platforms. Companies such as Ula (in Indonesia) help small retailers to manage their capital and productive stock better through their digital interface.<sup>11</sup>

## ASIA'S DIGITAL IMPACT IN EUROPE

Actionable steps:

- ▶ Asian VCs and firms can advance Europe's digital

transformation by investing in start-ups and unicorns that help to address critical public challenges such as climate change, health care and financial integration.

The opportunities for EU firms across Asia's digital landscape are immense given the acceleration and adoption of digital tools and technologies by Asian firms, especially SMEs that are relying on these applications to produce more goods and services. Conversely, Asian capital and technological know-how have penetrated Europe, influencing the pace and scope of Europe's digital innovation. The Covid-19 pandemic triggered a fall in Japan's outbound foreign direct investment (FDI), but saw an increase in Japanese VC investments abroad, especially in the Nordics. These investments have largely targeted emerging start-ups and potential unicorns.

One example is Nordic Ninja,<sup>12</sup> the largest Japanese deep tech fund in Europe, which combines Japanese investment networks with the backing of Japanese firms like Panasonic and Honda, and a Silicon Valley mindset, to invest in start-ups and unicorns that have a clear mission to build a more meaningful future. The fund's focus on Nordic countries is noteworthy, as the region has over 40 unicorns with twelve new unicorns in 2021 and more expected in 2022.<sup>13</sup> Climate change is a key area where the fund directs capital, building and deploying technologies to track carbon emissions and map urban solutions to achieve carbon neutrality. Besides Nordic Ninja and Softbank, other Japanese firms – including Mistletoe, Mitsubishi and Sony – have made investments in Europe.<sup>14</sup>

Beyond Japan, potential exists to expand Asia's financial/VC footprint and invest in Europe's technological ecosystem. Asian funds and institutional investors have great potential to develop and invest in technologies to advance climate progress. Several Asian countries, notably India and Singapore, have budding start-up

<sup>9</sup> <https://www.npci.org.in/what-we-do/upi/product-overview>

<sup>10</sup> <https://restofworld.org/2022/pakistan-tech-investment-boom/>

<sup>11</sup> <https://landing.ula.app>

<sup>12</sup> <https://nordicninja.vc>

<sup>13</sup> <https://nordicninja.vc/portfolio/>

<sup>14</sup> <https://www.eu-japan.eu/news/japans-new-investment-boom-nordic-tech>

ecosystems in areas like fintech and digital payments, which require external markets to feed their innovative capacity. Like the Nordics, European markets like Spain, Germany and France, which are edging ahead digitally with similar start-up landscapes and thriving talent, could partner with Asian companies thriving in these areas.

## THE FUTURE: EU-ASIA DIGITAL ECONOMY PARTNERSHIP?

Actionable steps:

- ▶ Policymakers across Asia and Europe must establish and conduct regular digital dialogues that ease constraints to digital trade. These discussions must consider, explore and remove barriers to digital interoperability.
- ▶ New digital rules covering issues like data, competition, privacy and identity must be established with sufficient coordination to ensure that firms have access to each other's digital markets and that compliance is not onerous.

What will the digital economy look like in Europe and Asia, what sectors and industries could dominate and will this future include pathways or opportunities to foster and cement the EU's and Asia's digital economic partnership? This is a difficult question to answer given the divergent digital pathways in both continents. Europe has seen a bevy of new rules and regulations to make the digital economy fair, open and transparent. Decentralized digital alternatives are rising rapidly to tame the powers of existing Big Tech firms and to offer users alternatives. Meanwhile, Asian countries generally lack effective digital economy rules and laws. This vacuum, however, has unleashed digital economic growth, with the rise of both large platforms and big and small companies that are using digital tools to reach customers and manage their operations.

Fintech is a major digital economic growth story, given the talent that exists in smaller markets such as Pakistan, India, Malaysia and Indonesia, which are innovating rapidly vis-à-vis digital payments. Opportunities exist for Asia and Europe to cooperate as the

internet fragments and decentralizes, particularly on the finance front. The current caution that we are now witnessing towards decentralized technologies (Web 3.0) could dissipate as users acquire digital financial assets. These DeFi tools will become more important for smaller Asian economies that lack their own digital infrastructures and rely on Big Tech platforms to drive digital economic activities.

It is likely that new digital economy laws covering issues such as data, competition and cyber security will soon be in place in Europe and several key Asian countries, including India, Indonesia, Malaysia and Vietnam. These rules could either facilitate or hinder digital interactions across continents. In Asia, governments need to streamline or digitize rules around businesses and commercial operations, given the current and future digital context that is being reshaped by both domestic unicorns and Big Tech firms.

Between Asia and Europe, emphasis must be placed on initiating and developing digital dialogues that tackle potential hindrances to digital trade. Interoperability is vital – but not a given. Countries across Europe and Asia will have to cooperate to draft and pass policies to boost digital interoperability, especially data. Competition rules must be updated. Privacy and customer attitudes are shifting, so policies and agreements should acknowledge and internalize that change. Digital identity could form a major part of digital interoperability across Europe and Asia. Users and consumers could have sufficient access to each other's digital platforms to accelerate digital trade. Countries could also introduce robust digital-ID policies that enable consumers to transact across markets through applications.

Emerging markets across Asia will continue to digitize. Digital transformations will continue, but these transformations must be characterized by European and Asian countries learning from each other on digitalization, data protection, privacy, online safety and secure digital identity. Asian countries can learn from their European counterparts as they devise digital rules covering these issues, while European countries could learn from Asian VCs and firms on how to scale and service large digital markets.

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## LINKING DIGITAL TRAJECTORIES: ASIA'S AND EUROPE'S DIGITAL FUTURES

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### ABOUT THE AESCON POLICY BRIEF SERIES

This Policy Brief is one of a series that sprang from the Asia-Europe Sustainable Connectivity (AESCON) conference held from 22-24 March 2022. The five Policy Briefs present the main findings and policy recommendations from the various [AESCON panels](#).

The series is edited by Maaïke Okano-Heijmans and Brigitte Dekker of the Clingendael Institute, and includes the following pieces:

- ▶ *Multistakeholderism: the path to human-centred digital connectivity*, by Maaïke Okano-Heijmans and Vanshika Shah of the Clingendael Institute, The Hague
- ▶ *Secure and resilient digital infrastructure: an agenda for Europe and Asia*, by Michał Rekowski of the Kosciuszko Institute, Kraków
- ▶ *Putting trust back in trusted connectivity: a call for more congruence in cross-border data transfers*, by Priyadarshini D of Carnegie India, New Delhi
- ▶ *Digital connectivity and opportunities for development cooperation between Asia and Europe*, by Christina Stansell, Fabian Hohmann and Elisabeth Gager of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bonn
- ▶ *Linking digital trajectories: Asia and Europe's opportunities in the digital economy*, by Karthik Nachiappan of the Institute of South Asian Studies, Singapore

