

Digital technology are rapidly evolving

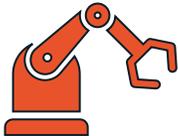
- Various new "digital" technologies have emerged more recently, both globally and in the region. A large part of these innovations occurs in services.

❖ A few examples of the new technologies include:

- 1. Information and communication technology (ICT) - enabled BPO**

- 2. Online payments**

- 3. E-commerce**

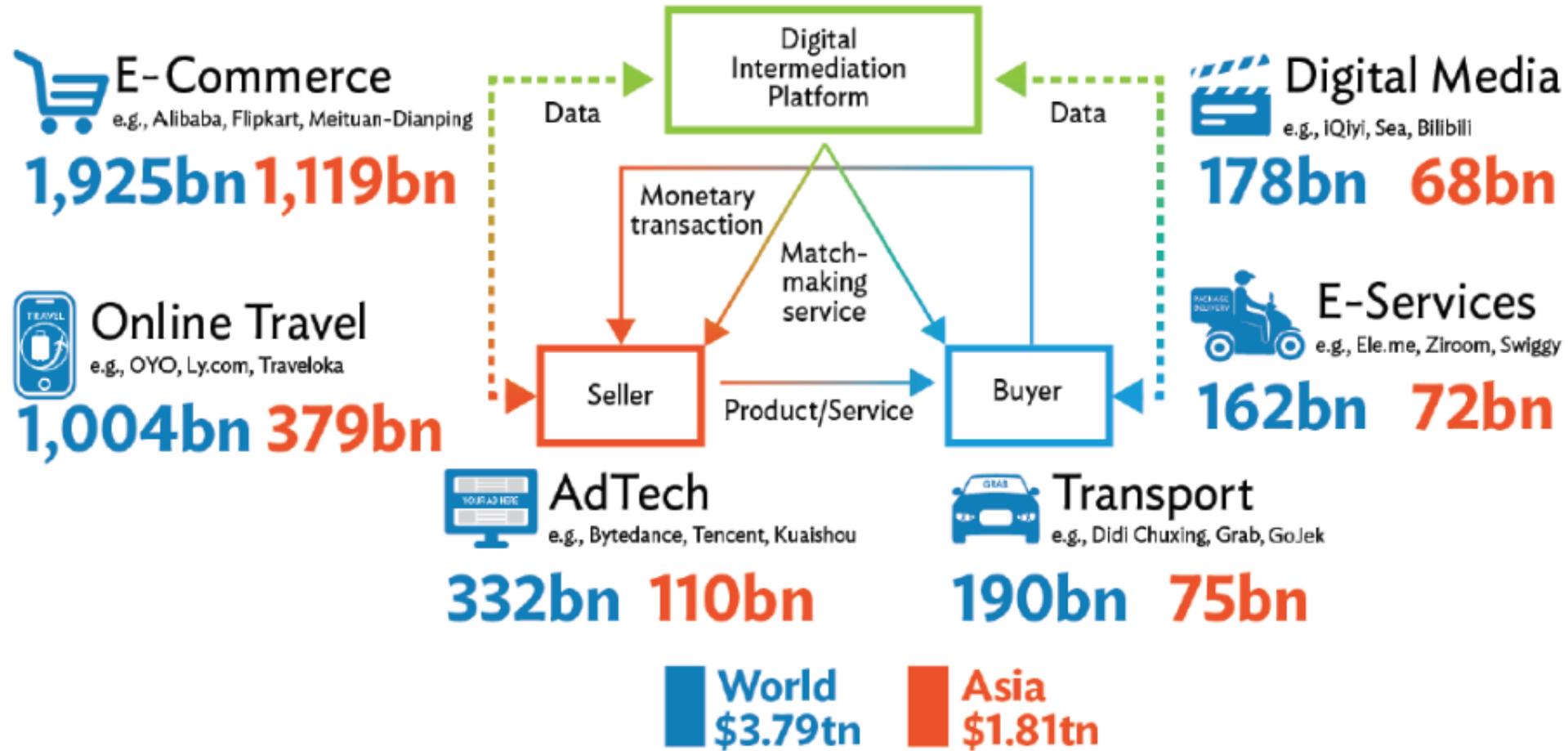
- 4. Artificial intelligence**

- 5. New logistics technologies using drones and satellite-based technology**


6. Social media



7. And shared economies such as Airbnb and Uber.

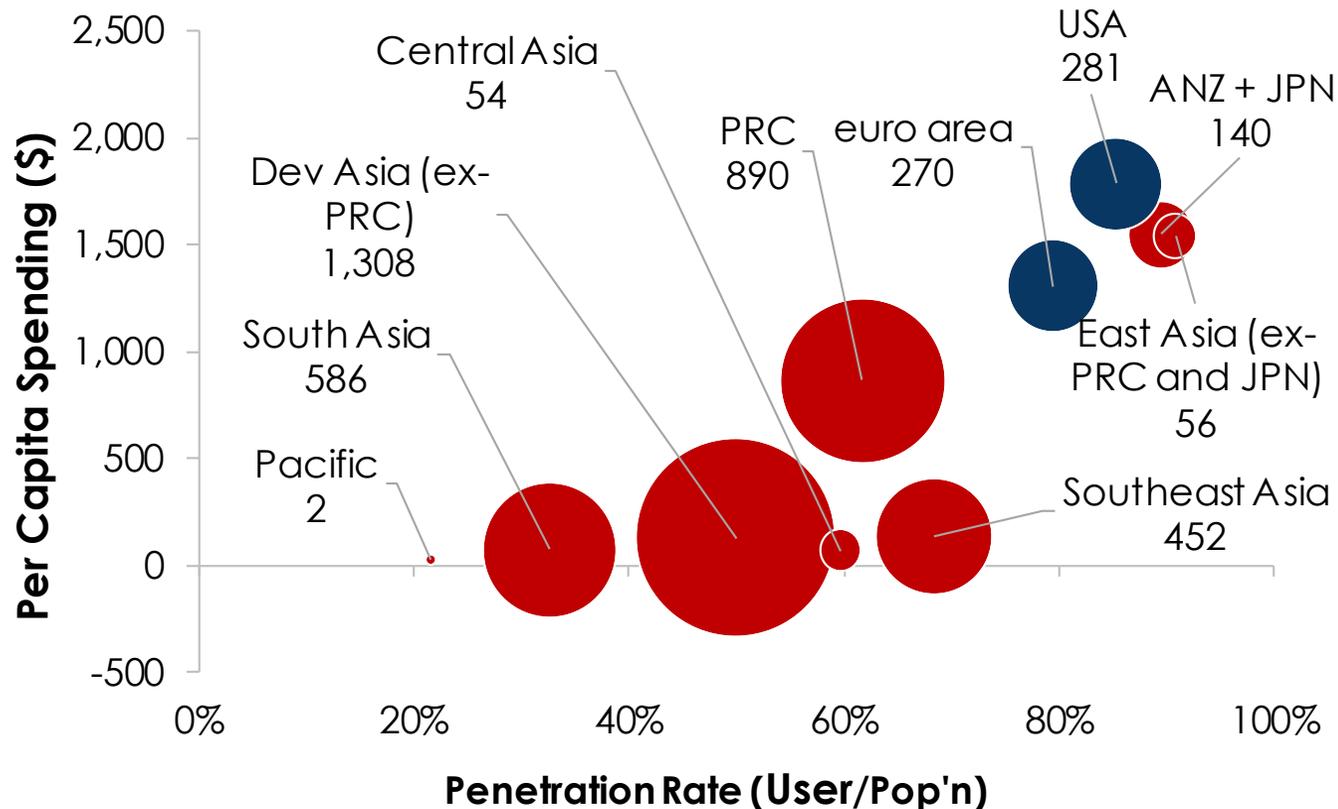
Digital platform revenues: Driving growth in Asia



bn = billion, tn = trillion.
 Note: Values refer to digital platform revenues in United States dollars.
 Source: ADB estimates based on Statista.

Asia in global digital platform competition

Digital Market Users, 2019 (million)



- Immense growth opportunities
- Large and growing number of users...
- ...but highly concentrated
- With varying penetration rates across Asia

ANZ + Japan = Australia, New Zealand, and Japan; PRC = People's Republic of China; USA=United States of America.
 Note: Source economies for Developing Asia (Dev Asia) excluding PRC are: Armenia, Azerbaijan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, Fiji, Georgia; Hong Kong, China; India, Indonesia, Kazakhstan, the Republic of Korea, Kyrgyz Republic, the Lao People's Democratic Republic, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Papua New Guinea, the Philippines, Singapore, Sri Lanka, Tajikistan, Thailand, Timor-Leste, Turkmenistan, Uzbekistan, and Viet Nam. Source economies for the eurozone are Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia, and Spain. The raw data are from Statista and the World Bank. Users refer to the AdTechexposed internet users.
 Source: ADB estimates.

Digital platforms spread benefits in many ways



Sellers:

- Search and information access
- Larger market reach
- Greater households, MSMEs participation
- Flexible arrangements
- Use of spare assets

Platforms:

- Build technology-enabled networks
- Do matching and services on-demand
- Skip intermediaries & trade barriers
- Facilitates payment and distribution
- Service or product rating and analytics

Buyers:

- Search and information access
- Wider choices
- Convenience
- Greater customization

Impact of digital platform growth on GDP, trade, and employment (2021–2025)

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Economy	GDP		Total Trade		Employment	
	Average gains from same-year baseline, 2021-2025, Bn \$	Average annual gains, % of 2020 baseline	Average gains from same-year baseline, 2021-2025, Bn \$	Average annual gains, % of 2020 baseline	Average gains from same-year baseline, 2021-2025, Mn	Average annual gains, % of 2020 baseline
World	4,282.9	5.4	2,370.1	5.5	139.6	5.0
Asia and the Pacific	1,729.0	6.1	1,017.0	6.8	65.5	3.9
Australia and New Zealand	84.1	5.9	26.3	4.0	0.6	7.0
Central Asia	46.1	11.5	23.5	7.7	2.3	7.1
East Asia ex PRC and JPN	134.8	5.9	123.0	5.0	1.5	5.5
PRC	448.1	3.8	239.9	4.6	14.3	2.2
Japan	399.3	7.9	223.6	13.8	3.7	8.1
Southeast Asia	286.6	8.4	248.6	8.0	18.0	6.2
Indonesia	136.3	8.8	44.6	10.0	10.0	8.3
Malaysia	28.1	8.8	45.5	9.2	1.0	8.2
Philippines	37.6	10.1	32.2	14.7	2.2	5.9
Singapore	19.2	6.2	16.1	2.3	0.1	8.0
Thailand	21.8	4.9	35.9	6.3	0.8	2.3
Viet Nam	27.5	10.9	59.9	11.0	2.6	5.1
South Asia	315.1	7.7	119.1	8.6	24.2	4.0
Pacific	14.9	26.8	13.0	15.6	0.9	26.1
G2	1,443.6	4.4	773.4	4.2	11.6	5.0
USA	566.7	3.3	104.6	2.2	2.6	2.9
EU-28	876.9	5.5	668.7	5.0	9.0	6.2
Rest of the World	1,110.3	6.4	579.8	5.8	62.5	7.3

Note: The calculations are based on the Global Trade Analysis Project database. Southeast Asia includes Timor-Leste. The Pacific subregion includes economies that are not ADB members. This is due to the aggregation of the Pacific subregion in project data.

Source: Narayanan and Villafuerte (forthcoming).

Digital platforms: Risks and challenges

- The region's e-readiness varies considerably
- Digital divide leads to rising inequality
- Digital platforms highly concentrated; risk of excessive market power for platform giants
- Digital platforms dramatically shift traditional labor relations; platform workers left with no social protection
- Intensive data collection raises data privacy and security issues; potential identity theft and cybercrime
- Base erosion and profit shifting (BEPS) a rising concern

E-readiness varies dramatically

2020 Digital Platform Penetration Index and Network Readiness Subindexes

Economy	DPP Index	Network Readiness Main Sub-indices			
		Technology	People	Governance	Impact
PRC	2.5847				
Korea, Rep. of	2.5283				
Australia	2.1010				
Hong Kong, China	2.0323				
New Zealand	1.8795				
Japan	1.7794				
Singapore	1.7644				
Malaysia	1.1008				
India	1.0220				
Viet Nam	0.9429				
Indonesia	0.9190				
Brunei Darussalam	0.8322	n.d.			
Philippines	0.8221				
Armenia	0.8077				
Pakistan	0.7960				
Kazakhstan	0.7929				
Thailand	0.7902				
Azerbaijan	0.7833				
Sri Lanka	0.6501				
Georgia	0.5751				
Kyrgyz Republic	0.5018				
Uzbekistan	0.4840	n.d.			
Nepal	0.4619				

Economy	DPP Index	Network Readiness Main Sub-indices			
		Technology	People	Governance	Impact
Fiji	0.4579	n.d.			
Cambodia	0.4416				
Tajikistan	0.4155				
Bangladesh	0.3928				
Myanmar	0.3909	n.d.			
Bhutan	0.3119	n.d.			
Mongolia	0.2824				
Lao PDR	0.2523				
Timor-Leste	0.2486	n.d.			
Papua New Guinea	0.2111	n.d.			
Turkmenistan	0.1565	n.d.			

Lao PDR = Lao Democratic People's Republic, n.d. = no available data, PRC = People's Republic of China.

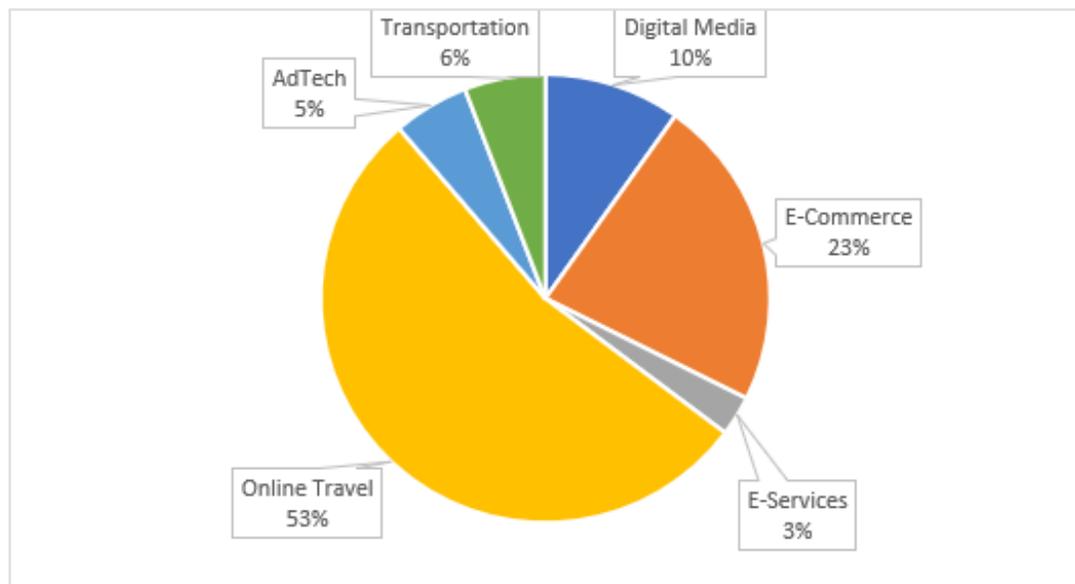
Notes:

- (i) Maximum and minimum values are set at 0 and 100, following the scale in Dutta and Lanvin (2020). Low to high value spectrum: 
- (ii) The **Technology sub-index** captures access, content, and future technologies.
- (iii) The **People sub-index** captures the readiness and aptitude of individuals, businesses, and governments.
- (iv) The **Governance sub-index** captures trust, regulation, and inclusion.
- (v) The **Impact sub-index** captures economic value, quality of life, and contribution to sustainable development goals.
- (vi) The specific indicators used and the methodology are laid out in Appendices 1 to 3 of Dutta and Lanvin (2020), https://networkreadinessindex.org/wp-content/uploads/2020/11/NRI-2020-V8_28-11-2020.pdf.

Source: Asian Development Bank estimates and Dutta and Lanvin (2020).

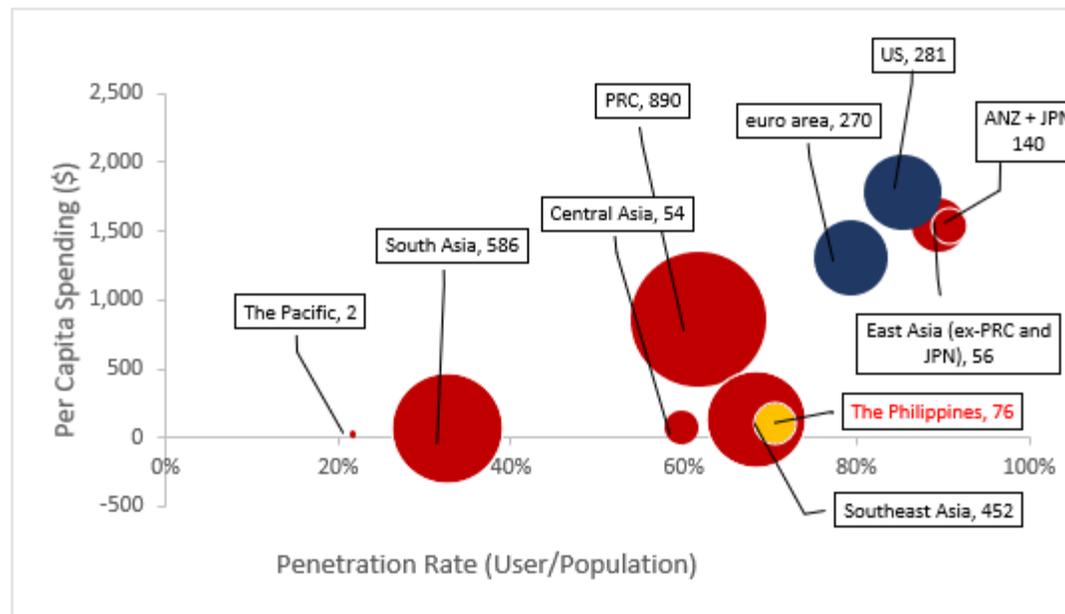
Digital platforms are important for the Philippines

Digital Revenue in the Philippines, 2019 (% by Sector)



Sources: ADB calculations using data from Statista (2020a, 2020b).

Digital Market Users, 2019 (million)



ANZ+JPN = Australia, New Zealand, and Japan; Dev Asia = developing Asia; PRC = People's Republic of China; US = United States.

Notes: Dev Asia includes Central Asia, East Asia ex-Japan, South Asia, Southeast Asia and the Pacific. Central Asia includes Armenia, Azerbaijan, Georgia, Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan. East Asia includes Hong Kong, China; Mongolia; Japan; the PRC; and the Republic of Korea. South Asia includes Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka. Southeast Asia includes Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam. Pacific includes Fiji, Papua New Guinea, and Timor-Leste. Euro area includes Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. Users refer to the AdTech-exposed internet users.

Sources: ADB calculations using data from Statista (2020a, 2020b) and World Bank. World Development Indicators. <https://databank.worldbank.org/source/worlddevelopmentindicators> (accessed July 2020).

Innovative data improved policies during Covid-19

- After the outbreak of **COVID-19**, ADB supported Philippines Government's Food transfer program, **Bayan Bayanihan** program.
- To identify the **targeted communities**, we used the granular poverty map made by innovative data sets.
- Useful for poverty impact assessments of COVID-19 in the future.



FINTECH: Tricycle Drivers in the Philippines, 2019-21



- ADB and Global Mobility Service partnered for a pilot project in Manila, Philippines
- Credit to purchase tricycles equipped with trackers for location, speed, battery of tricycle
- Value addition of Technology:
 - Access to credit without collateral
 - Helps address moral hazard and failure to repay

There are 6 priorities to unlock the digital potential



Affordability and access to ICT

In LDCs only 19% of population is online (2019)



Digital skills/literacy training through smart devices and e-learning hubs

149 million new jobs in technical areas will be needed by 2025



E-payment availability and options

90% of initiatives to combat informality linked to digital payments



Cooperation for better, effective, more efficient taxation policies and options

59% of ADB member countries joined the OECD/G20 Inclusive Framework to tackle tax and digitalisation



Logistics and delivery infrastructure

In maritime trade, Asia accounts for 41% of goods loaded and 62% of good unloaded



Laws, rules, and regulations for data privacy and cybersecurity

76.1% of respondents to the Global Risk Report Survey identify cyber-security as the top 5 global risks for 2020

Key Messages

- Digital platforms transform how we work (pandemic accelerated process); if digital sectors expand 20% from the 2020 baseline by 2025, global output rises by \$4.3 trillion annually, with Asia's output rising \$1.7 trillion yearly
- Risks and challenges include privacy and cybersecurity, tax arbitrage and loopholes, and anti-competitive behavior—critical to design appropriate policies and regulations
- A menu for success—affordable and quality ICT infrastructure, seamless digital connectivity, digital skills and literacy, secure online payment systems, financial access for innovative startups, efficient e-government, effective legal and regulatory frameworks
- The imperative of digital inclusion—no-one left behind
 - education and labor policy reform is crucial to broaden gains from the digital economy
 - designing universal, portable, and digitally-enabled social protection is also key
- Digital platforms play an important role for the Philippines; if digital sectors expand 20% from the 2020 baseline by 2025 in the Philippines, it could add an additional output of \$37.6 billion and 2.2 million new jobs a year to the country.