

The ADB logo consists of the letters 'ADB' in a white, serif font, centered within a dark blue square.

ADB

# Embracing the Ecommerce Revolution in Asia and the Pacific

A stylized digital globe in shades of blue and cyan, featuring a network of glowing lines and dots representing global connectivity and data flow. The globe is positioned on the right side of the slide, partially overlapping the title text.

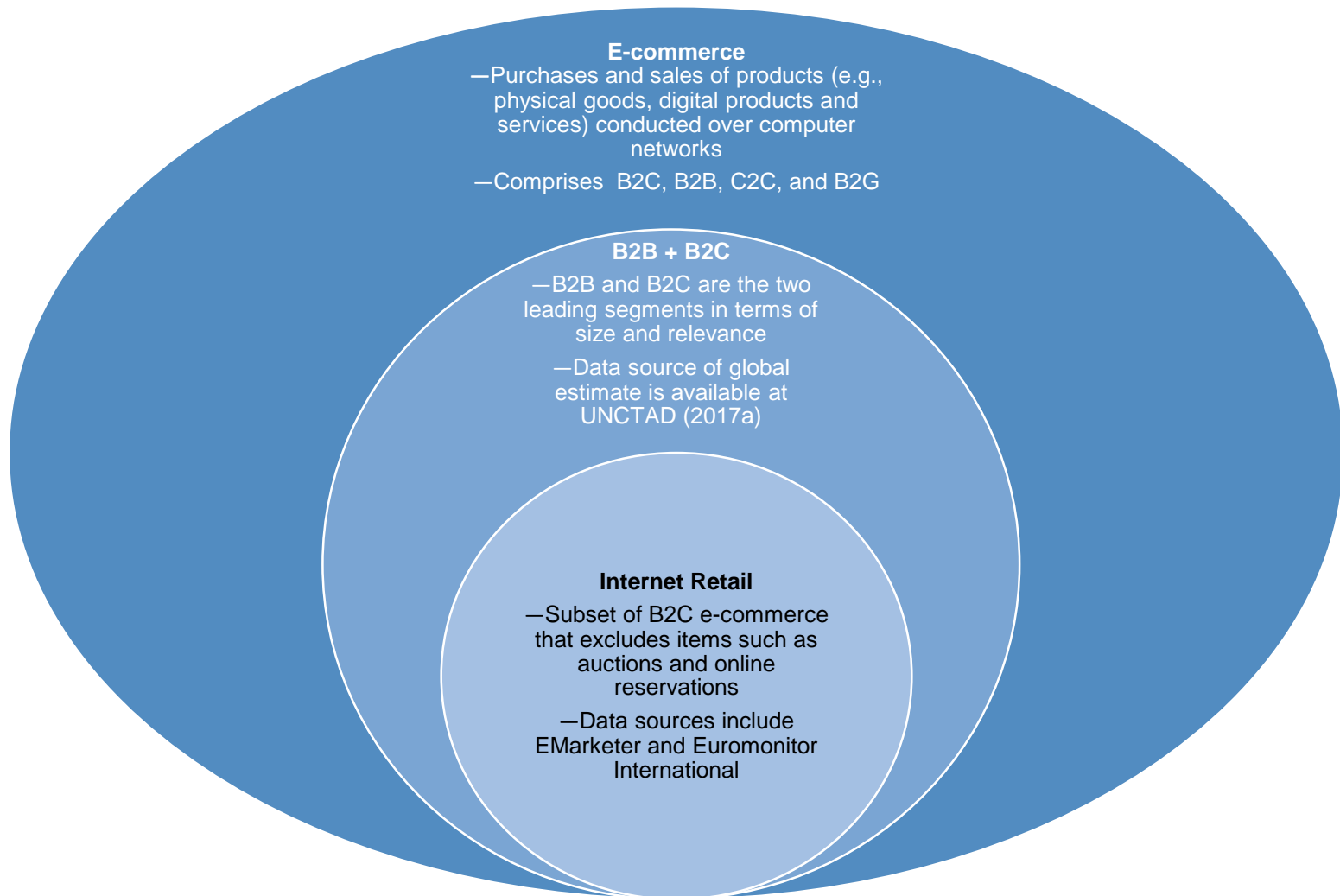
**Jong Woo Kang**

Principal Economist

Economic Research and Regional Cooperation Department

Asian Development Bank

# Coverage of E-Commerce

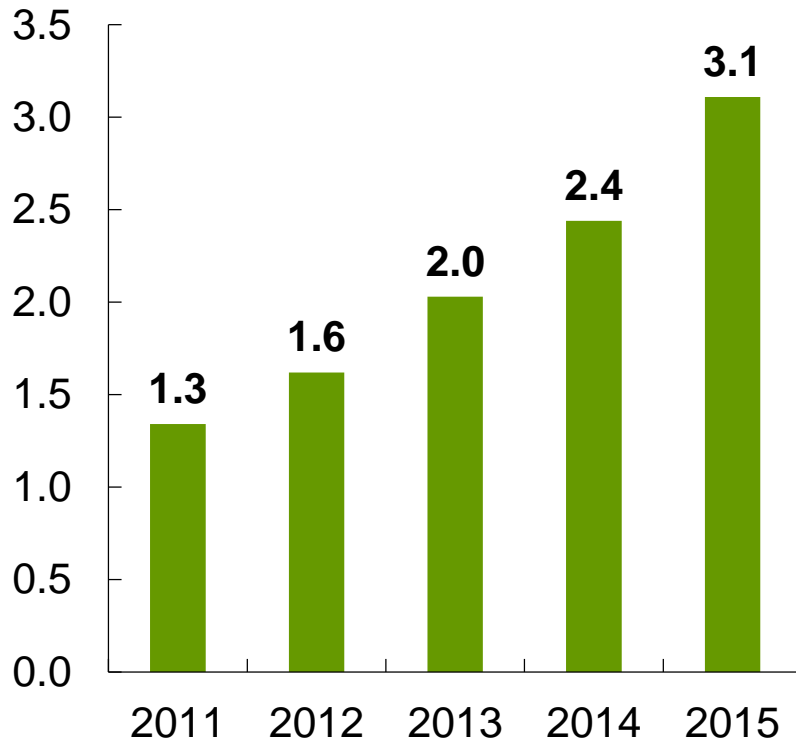


B2B = business-to-business, B2C = business-to-consumer, B2G = business-to-government, C2C = consumer-to-consumer, UNCTAD = United Nations Conference on Trade and Development.

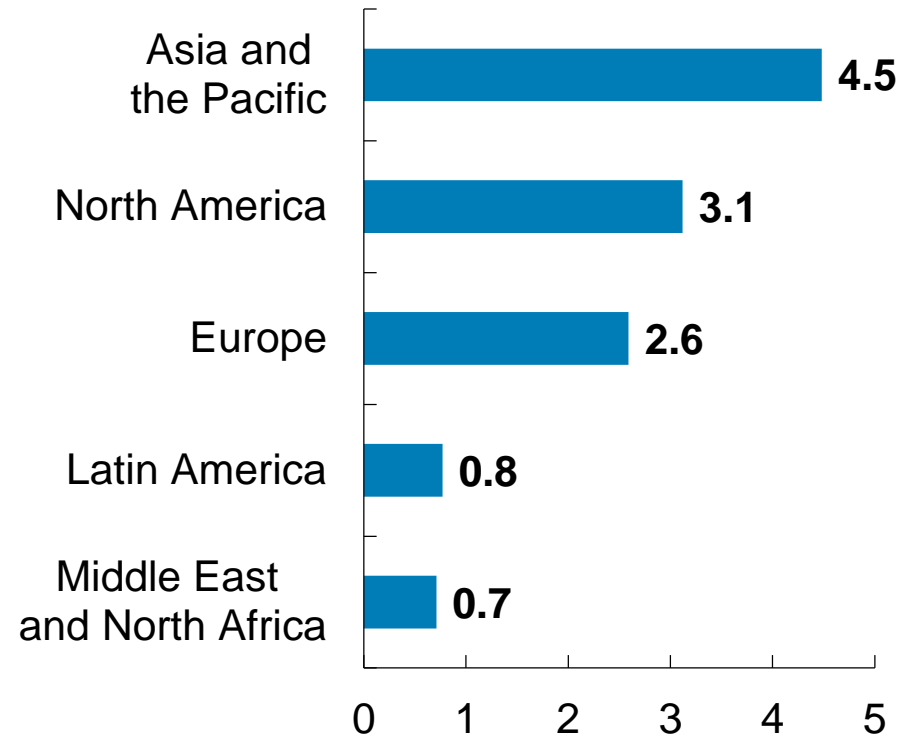
Sources: Ecommerce Foundation (2016a), eMarketer (2017b), Euromonitor International (2018), and UNCTAD (2015).

# Asia is at the Forefront

## Global E-commerce (% of GDP)



## Regional E-commerce, 2015 (% of GDP)



GDP = gross domestic product.

Note: Business-to-Consumer (B2C) e-commerce covers any contract for the sale of goods and/or services, fully or partially concluded by a technique for distance communication. Values refer to the total of goods and services sold through B2C transactions as a percentage of GDP.

Source: Ecommerce Foundation (2016).

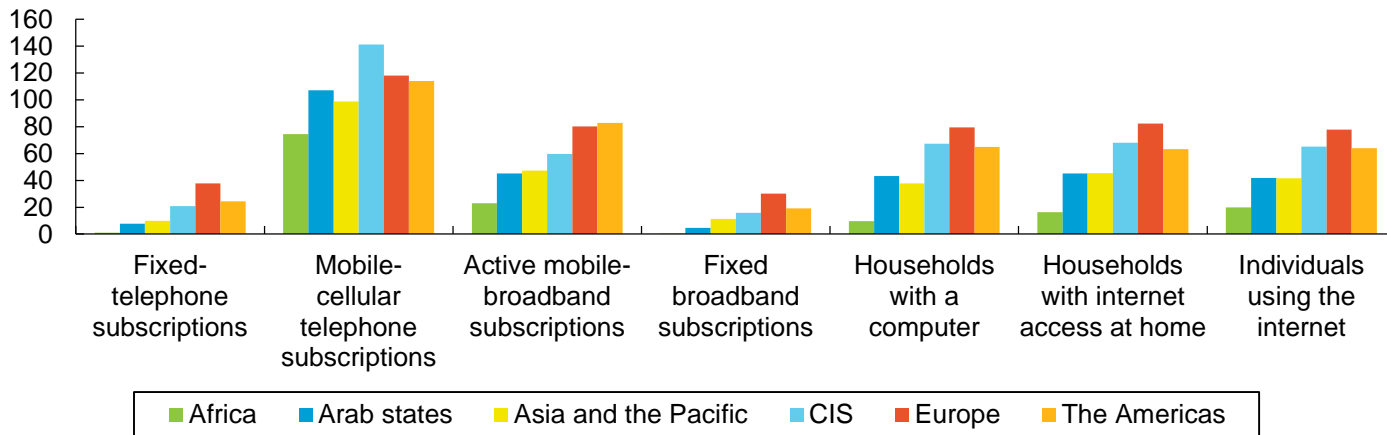
# Economic Benefits and Costs of Using E-commerce

Benefits	Costs
<ul style="list-style-type: none"><li>• Boosts efficiency and increases gross domestic product</li><li>• Allows economies to increase participation in global value chains</li><li>• Increases labor productivity and supports job creation, entrepreneurship, innovation, and creativity</li><li>• Leads to energy savings and lower carbon emissions</li><li>• Advances inclusive growth (benefitting developing economies, rural areas, women and the elderly, among others)</li></ul>	<ul style="list-style-type: none"><li>• Requires social and physical capital investment</li><li>• Could lead to transfer pricing and erosion of tax revenue</li><li>• Potential to widen economic disparity</li><li>• Potential to distort competition</li></ul>

Source: ADB compilation based on Anvari and Norouzi (2016); Bram and Gorton (2017); Ca' Zorzi (2000); Carnegie Mellon University (2009); Cockfield et al. (2013); Hinojosa (2017); Mueller and Shoenmaker (2007); Organisation for Economic Co-operation and Development, United Nations Conference for Trade and Development (UNCTAD), and World Trade Organization (2016); Palsson, Pattersson, and Hiselius (2017); Savrul and Kılıç (2011); UNCTAD (2015, 2017b); and World Bank (2003, 2016b).

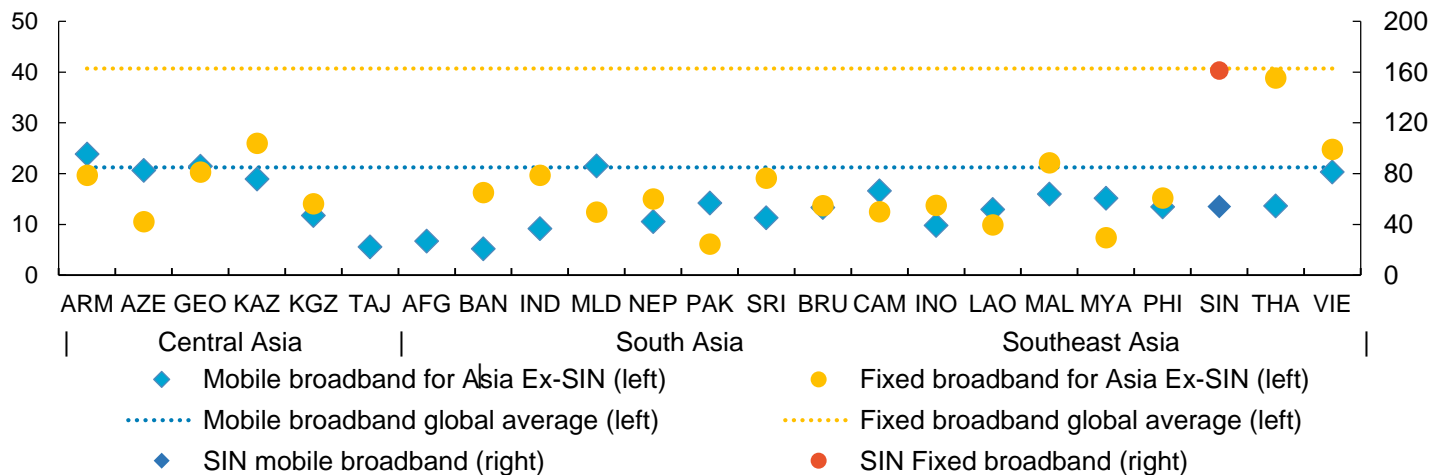
# ICT Infrastructure

Key ICT Indicators by Region, 2016 (per 100 inhabitants)



Source: International Telecommunication Union. Statistics. <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>

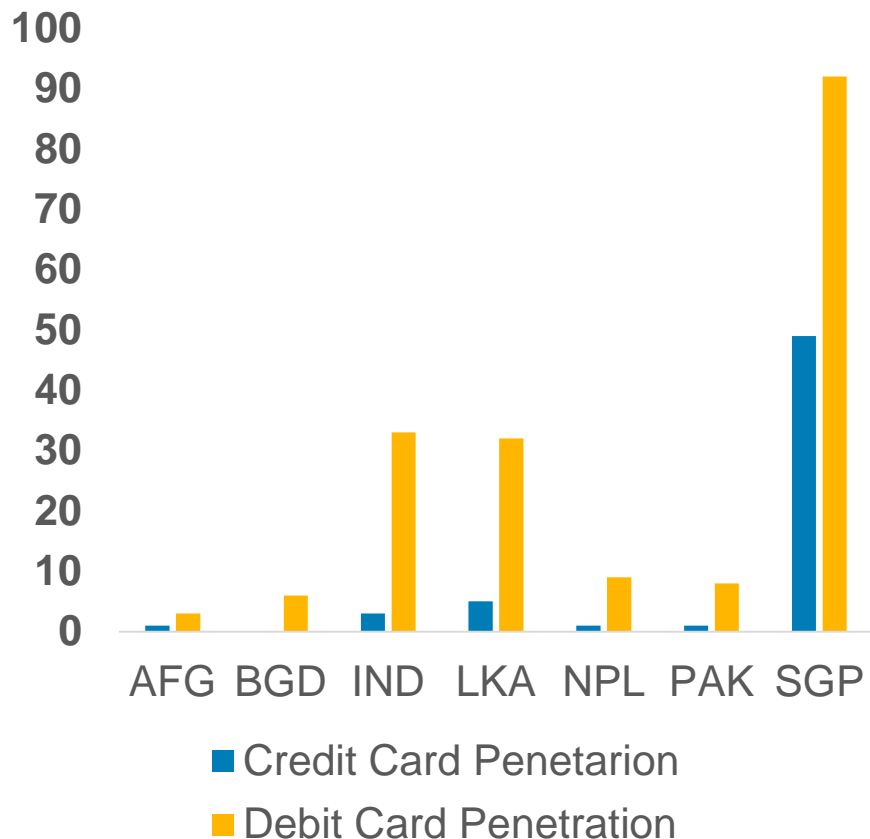
Mobile and Fixed Broadband Speed—Central and West Asia, South Asia, and Southeast Asia, as of December 2017 (megabits per second, download)



Source: Speedtest. Speedtest Global Index December 2017. <http://www.speedtest.net/global-index>

# E-Payment

**Credit and Debit Card Ownership, 2017**  
(% of adults)



Source: WB - Financial Inclusion Index (2017).

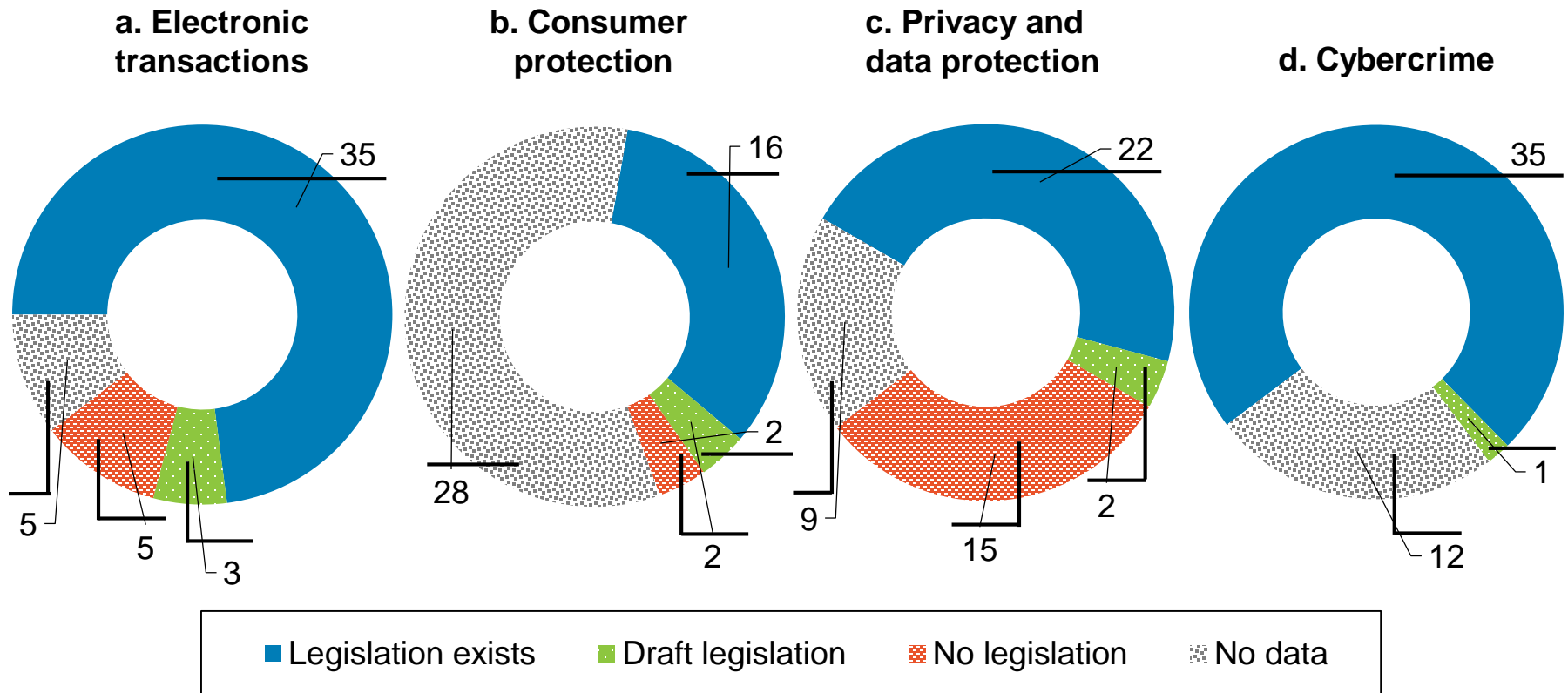
**COD Transactions as Percentage of Total Online Transactions**

Economy	Year	% share
Bangladesh	2016	75.0
China, People's Rep. of	2009	70.0
	2014	30.0
India	2017	67.0
Indonesia	February 2017	65.3
Pakistan	2017	80.0 / 95.0
Thailand	2014	70.0
Philippines	2017	80.0
Viet Nam	2015	80.0

Sources: Aziz (2017b); Briefing (2014); Chadha (2017a); Domingo (2017); Houghton (2015); Rahman (2016); Sakawee (2014); Shaffi (2017); The Economist (2017a).

# Legislation

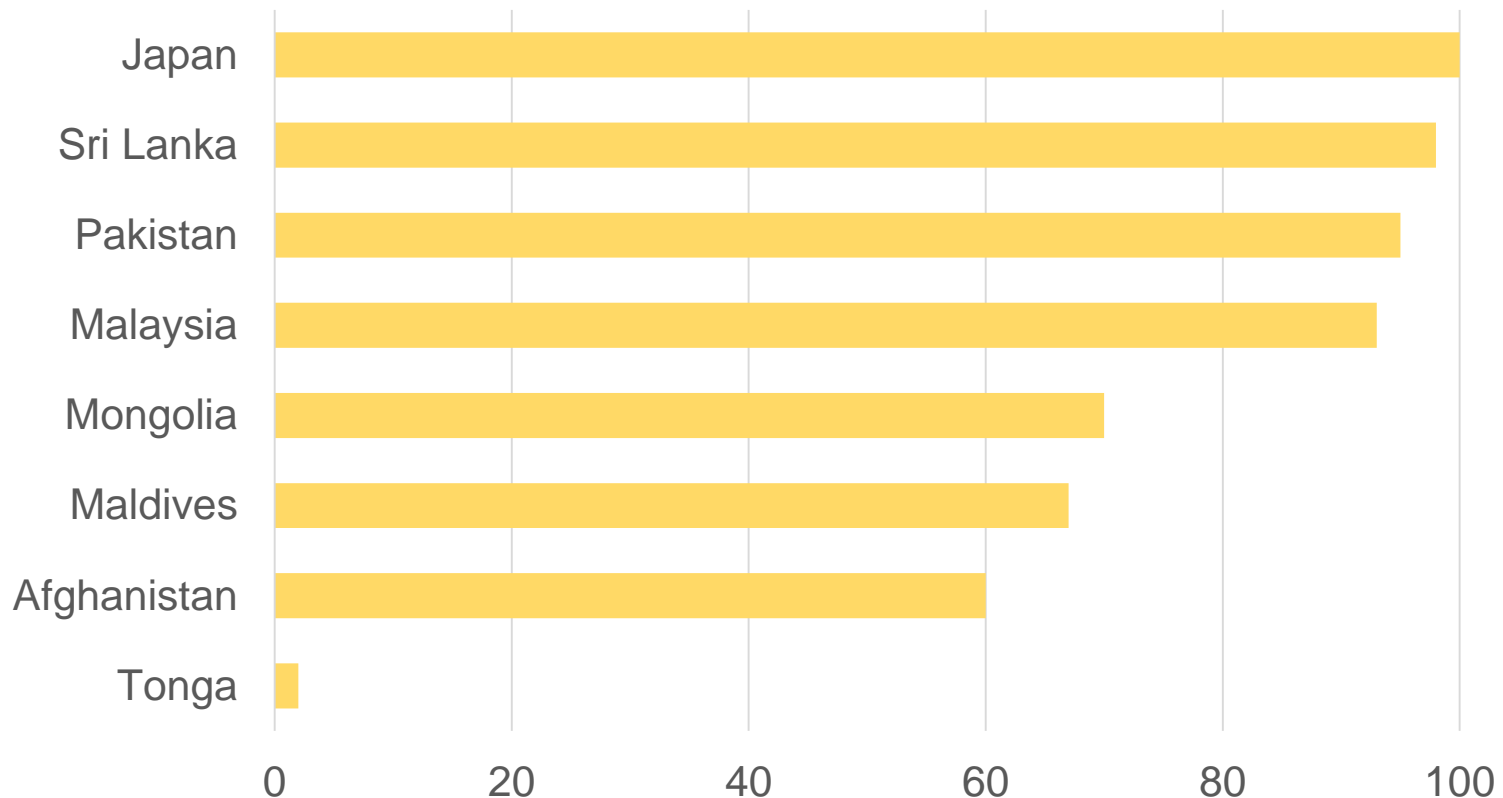
Status of E-commerce Legislation—Asia and the Pacific,  
as of December 2017 (Number of economies)



Sources: various international and local sources

# Delivery Infrastructure

## Population with Access to Home Mail Delivery— Selected Asian Economies, 2016 (% of population)

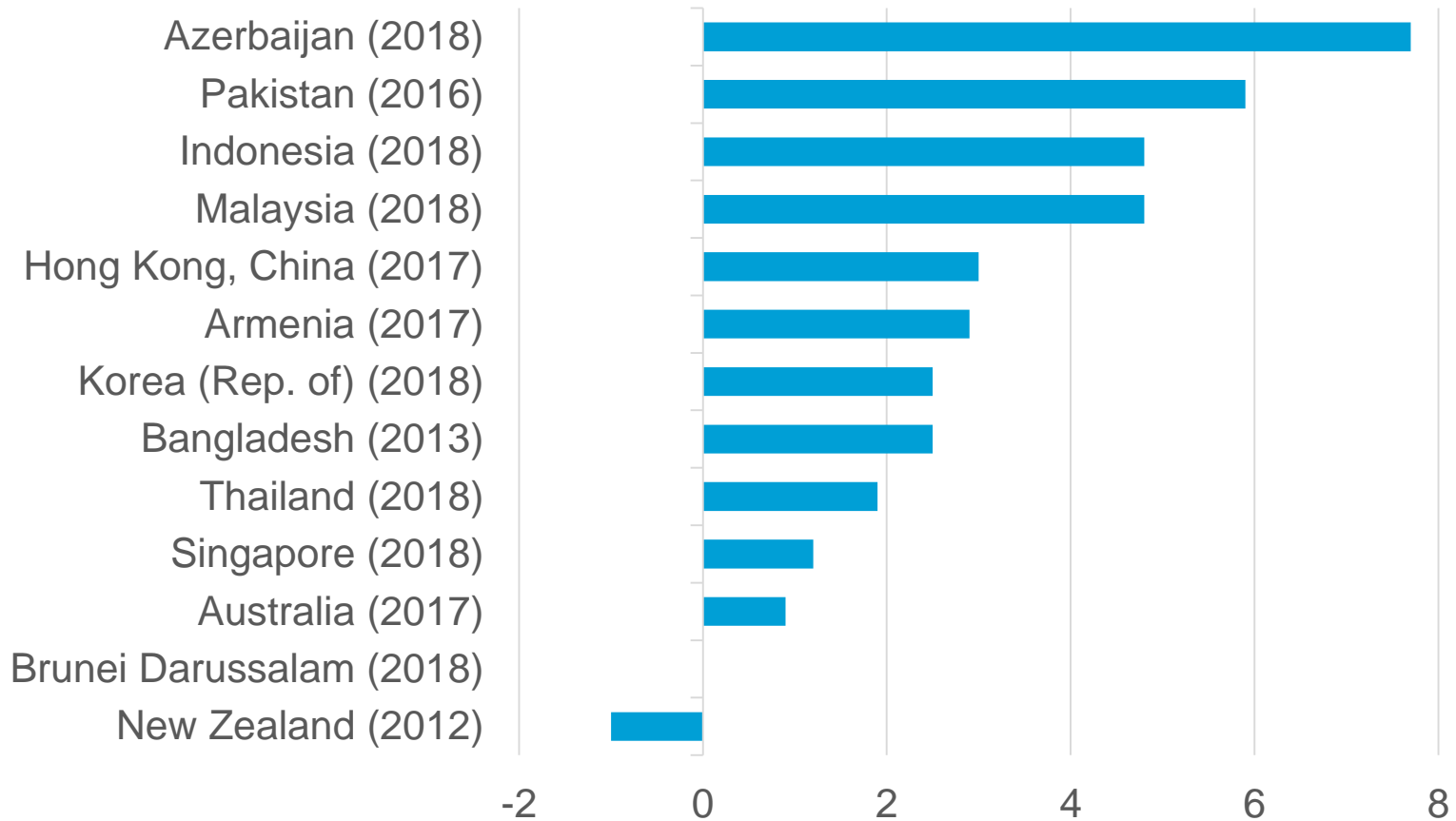


Source: Universal Postal Union. <http://www.upu.int/en/resources/postal-statistics/query-the-database/data-by-country.html>.  
Note: Tonga data is in 2015.



# Uneven Opportunities: Gender Gap

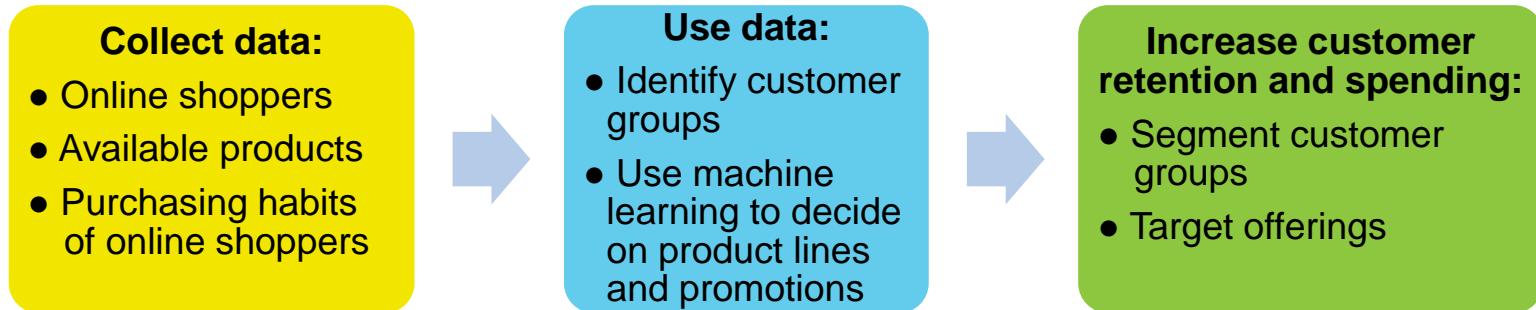
## Gender Gap in Internet Access—Selected Asian Economies (% of males minus % of females)



Source: International Telecommunication Union. Gender ICT statistics. <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>

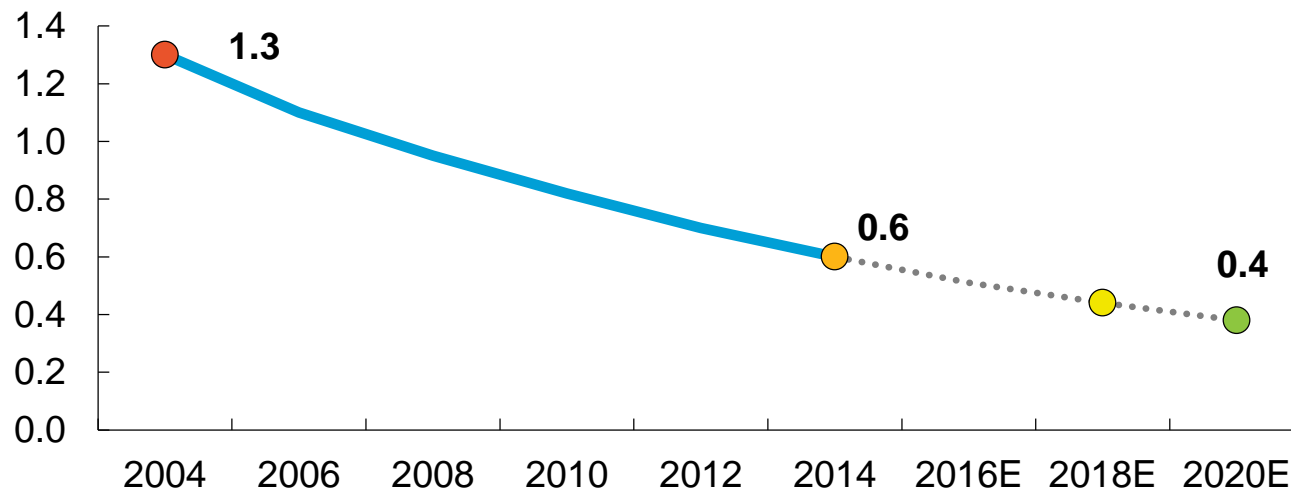
# Emerging Technologies affecting the E-Commerce Landscape

## Big Data Use in the People's Republic of China to Boost Customer Retention and Spending



Source: ADB based on Wang (2016)

## Average Sensor Cost for the Internet of Things—Global (\$ per unit)



Source: BI Intelligence (2014)

# Emerging Technologies affecting the E-Commerce Landscape

Technology	Examples of use	Benefits of combining with 5G
<b>IoT</b>	IoT can improve consumer experience, track inventory in real-time and manage more effectively (e.g., JD.com)	5G's faster data-transmission will make it easier to transfer data created by IoT devices.
<b>AI</b>	AI-enabled apps—such as Amazon and Google assistant—can order products online, track orders and perform other e-commerce activities.	5G's faster data-transmission will allow quicker access to additional information and help the AI better understand the environment and context.
<b>Blockchain</b>	<p>Blockchain-based smart contracts can be used by online vendors to automate order fulfillment.</p> <p>Blockchains have been used in supply chain management systems and B2B e-commerce (e.g. the PRC's JD.com).</p>	<p>5G can help feed information (e.g., from IoT devices) required for a smart contract more efficiently.</p> <p>It can also provide better security.</p>
<b>AR/VR</b>	AR enabled apps allow a potential customer to place real products in a virtually setting to provide clear visualization of product use (e.g., Lego and IKEA).	5G network's higher bandwidth, reduced latency and greater uniformity (mobile connection's consistency across locations) allows transmission of complex worlds and sophisticated inputs that require processing of huge amounts of data.

Source: ADB compilation based on Dave (2017), Harbet (2018), IDG (2018), and Xiao (2017).

# E-commerce boosts efficiency, enhances market access for businesses and consumers, and generates spillover effects

To unlock the potential of digital trade and e-commerce, it is imperative to take on the following measures:



Enhance affordability of and access to ICT



Institute legal, regulatory and institutional reforms



Improve logistics and delivery infrastructure

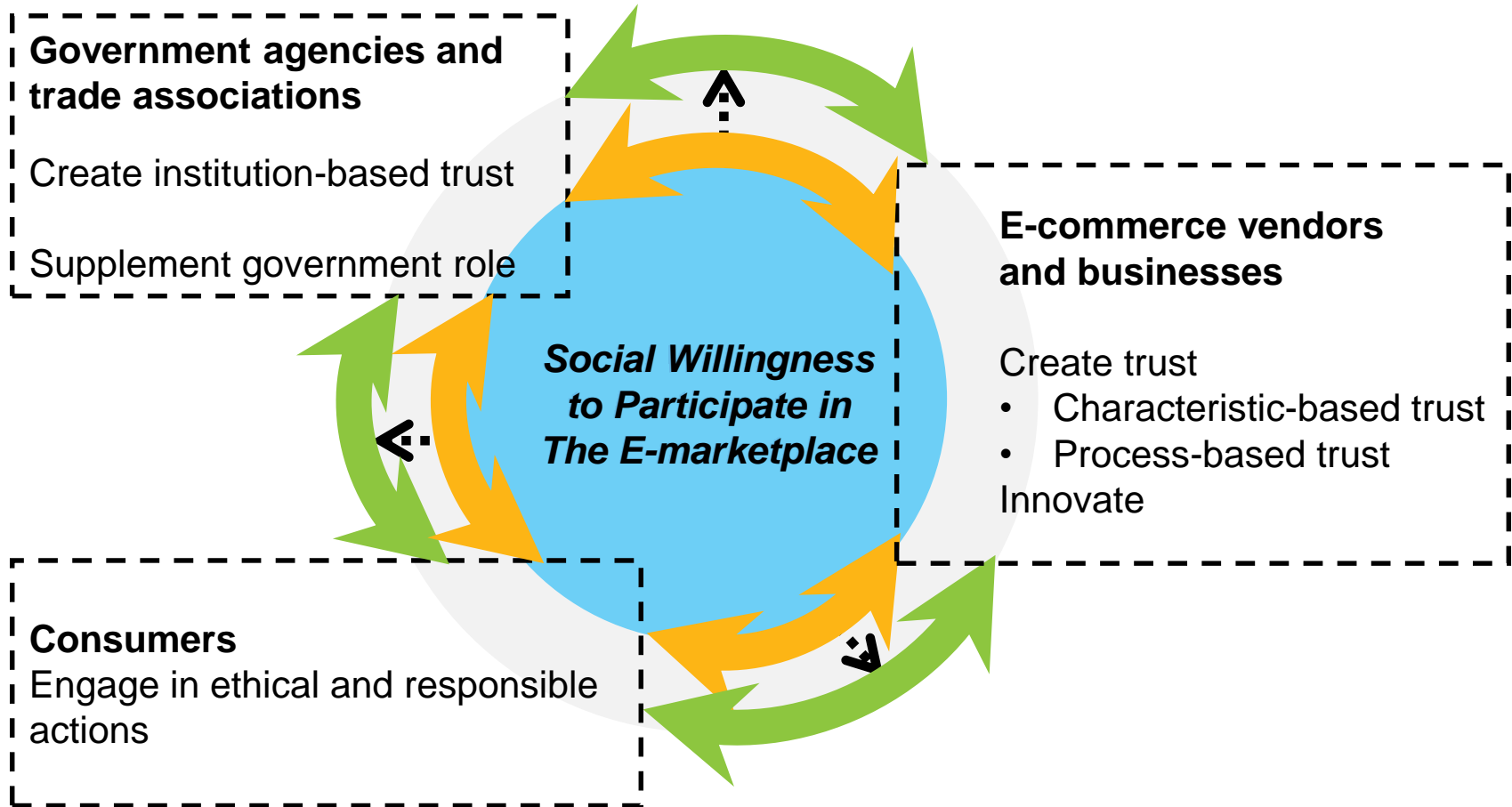


Intensify regional efforts to modernize and harmonize regulations



Broaden the e-payment availability and options

# Creating a Virtuous Cycle in E-marketplace Development



Source: ADB compilation based on Albers-Miller (1999), Ang *et al.* (2001), Levi (1998), and Zucker (1986).



# Thank you!