Embracing the Ecommerce Revolution in Asia and the Pacific

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Coverage of E-Commerce

E-commerce
— Purchases and sales of products (e.g., physical goods, digital products and services) conducted over computer networks

B2B + B2C
— B2B and B2C are the two leading segments in terms of size and relevance
— Data source of global estimate is available at UNCTAD (2017a)

Internet Retail
— Subset of B2C e-commerce that excludes items such as auctions and online reservations
— Data sources include eMarketer and Euromonitor International

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

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Costs</th>
</tr>
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<tbody>
<tr>
<td>• Boosts efficiency and increases gross domestic product</td>
<td>• Requires social and physical capital investment</td>
</tr>
<tr>
<td>• Allows economies to increase participation in global value chains</td>
<td>• Could lead to transfer pricing and erosion of tax revenue</td>
</tr>
<tr>
<td>• Increases labor productivity and supports job creation, entrepreneurship, innovation, and creativity</td>
<td>• Potential to widen economic disparity</td>
</tr>
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<td>• Leads to energy savings and lower carbon emissions</td>
<td>• Potential to distort competition</td>
</tr>
<tr>
<td>• Advances inclusive growth (benefitting developing economies, rural areas, women and the elderly, among others)</td>
<td></td>
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Source: ADB compilation based on Anvari and Norouzi (2016); Bram and Gorton (2017); Ca’ Zorzi (2000); Carnegie Melon 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)


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

**E-Payment**

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

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

<table>
<thead>
<tr>
<th>Economy</th>
<th>Year</th>
<th>% share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>2016</td>
<td>75.0</td>
</tr>
<tr>
<td>China, People’s Rep. of</td>
<td>2009</td>
<td>70.0</td>
</tr>
<tr>
<td></td>
<td>2014</td>
<td>30.0</td>
</tr>
<tr>
<td>India</td>
<td>2017</td>
<td>67.0</td>
</tr>
<tr>
<td>Indonesia</td>
<td>February 2017</td>
<td>65.3</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2017</td>
<td>80.0 / 95.0</td>
</tr>
<tr>
<td>Thailand</td>
<td>2014</td>
<td>70.0</td>
</tr>
<tr>
<td>Philippines</td>
<td>2017</td>
<td>80.0</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>2015</td>
<td>80.0</td>
</tr>
</tbody>
</table>

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)

**a. Electronic transactions**
- Legislation exists: 35
- Draft legislation: 5
- No legislation: 3

**b. Consumer protection**
- Legislation exists: 28
- Draft legislation: 2
- No legislation: 2

**c. Privacy and data protection**
- Legislation exists: 15
- Draft legislation: 1
- No legislation: 9

**d. Cybercrime**
- Legislation exists: 35
- Draft legislation: 1
- No legislation: 12

Sources: various international and local sources
Delivery Infrastructure

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

Note: Tonga data is in 2015.
Uneven Opportunities: Gender Gap

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

Azerbaijan (2018)
Pakistan (2016)
Indonesia (2018)
Malaysia (2018)
Hong Kong, China (2017)
Armenia (2017)
Korea (Rep. of) (2018)
Bangladesh (2013)
Thailand (2018)
Singapore (2018)
Australia (2017)
Brunei Darussalam (2018)
New Zealand (2012)

Emerging Technologies affecting the E-Commerce Landscape

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

Collect data:
- Online shoppers
- Available products
- Purchasing habits of online shoppers

Use data:
- Identify customer groups
- Use machine learning to decide on product lines and promotions

Increase customer retention and spending:
- Segment customer groups
- Target offerings

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

<table>
<thead>
<tr>
<th>Technology</th>
<th>Examples of use</th>
<th>Benefits of combining with 5G</th>
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<tbody>
<tr>
<td><strong>IoT</strong></td>
<td>IoT can improve consumer experience, track inventory in real-time and manage more effectively (e.g., JD.com)</td>
<td>5G’s faster data-transmission will make it easier to transfer data created by IoT devices.</td>
</tr>
<tr>
<td><strong>AI</strong></td>
<td>AI-enabled apps—such as Amazon and Google assistant—can order products online, track orders and perform other e-commerce activities.</td>
<td>5G’s faster data-transmission will allow quicker access to additional information and help the AI better understand the environment and context.</td>
</tr>
<tr>
<td><strong>Blockchain</strong></td>
<td>Blockchain-based smart contracts can be used by online vendors to automate order fulfillment. Blockchains have been used in supply chain management systems and B2B e-commerce (e.g. the PRC’s JD.com).</td>
<td>5G can help feed information (e.g., from IoT devices) required for a smart contract more efficiently. It can also provide better security.</td>
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<tr>
<td><strong>AR/VR</strong></td>
<td>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).</td>
<td>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.</td>
</tr>
</tbody>
</table>

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

- **Government agencies and trade associations**
  - Create institution-based trust
  - Supplement government role

- **E-commerce vendors and businesses**
  - Create trust
    - Characteristic-based trust
    - Process-based trust
  - Innovate

- **Consumers**
  - Engage in ethical and responsible actions

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Thank you!