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The Development Dimension of E-Commerce in Asia: Opportunities and Challenges

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Key points

- E-commerce facilitates trade and leads to job creation, which lead to economic growth.
- Multilateral organizations, national governments, and private firms contribute to its widespread adoption and sophistication.
- Inadequate infrastructure and disharmonious regulatory procedures restrain Asia from fully realizing the potential of cross-border digital trade.
- International cooperation and a more focused national strategy are needed to further e-commerce.

E-commerce is the sale and purchase of goods and services through electronic networks and the internet, encompassing a broad range of commercial activity. While widespread adoption of e-commerce in advanced economies is evident, physical and institutional barriers to its application in developing countries must first be overcome. Governments, multilateral organizations, and the private sector must cooperate in fostering an environment that is conducive to its implementation.

Increasing influence of e-commerce

The United Nations Conference on Trade and Development (UNCTAD) estimated that global e-commerce sales comprising business-to-business (B2B) and business-to-consumer (B2C) transactions amounted to $16.1 trillion in 2013. In 2014, 40% of 3 billion people online participated in e-commerce (WCO 2014). Many factors contributed to e-commerce growth such as changes in information technology and connectivity, sophisticated changes in business models, and a supportive regulatory and legal environment in many countries.

Although the bulk of e-commerce transactions occur in developed markets (particularly in the United States, the United Kingdom, Northern Ireland, and Japan), developing countries have started to catch up recently, led by those in Asia where many have become important buyers and sellers of goods and services online. For example, the People's Republic of China (PRC) now has the largest B2C market in the world, surpassing the United States. The PRC's Alibaba Group has grown by 120% since 2013 and has 24,000 employees. Aside from the PRC, Indonesia and India are also expected to show the fastest growth in this market segment. As a result, the combined share of Asia (and Oceania) in the world's B2C market is projected to further increase to 37% in 2018 from 28% in 2013 (Figure 1).

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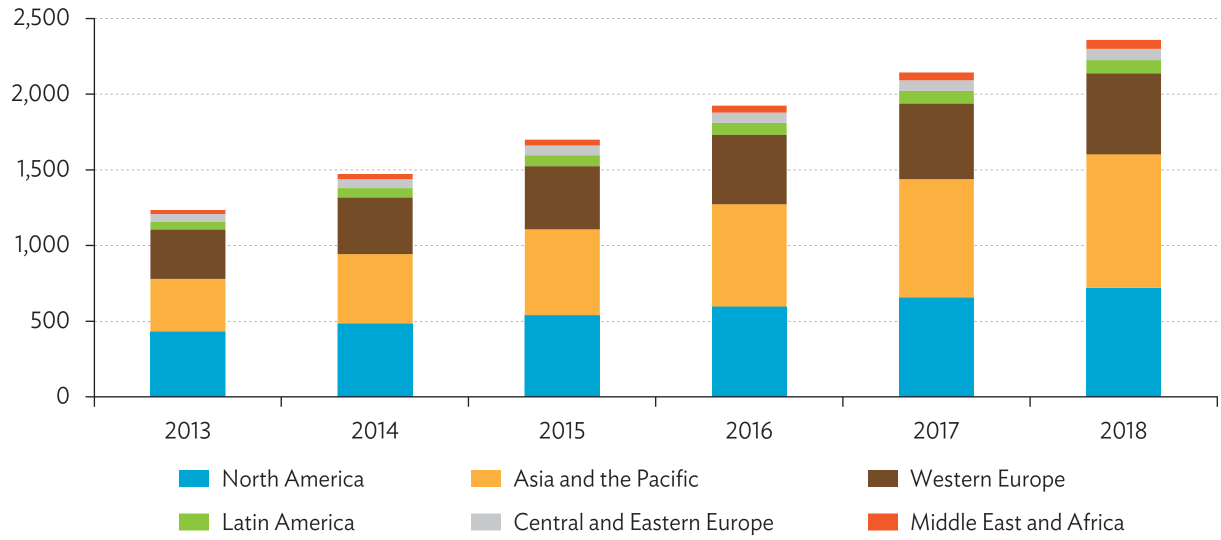
Fig. 1 Forecasts of B2C e-commerce sales by region ($ billion)



B2C = business-to-consumer.

Source: eMarketer. 2014. Worldwide Ecommerce Sales to Increase Nearly 20% in 2014. July. http://www.emarketer.com/Article/Worldwide-Ecommerce-Sales-Increase-Nearly-20-2014/1011039

Why e-commerce matters

According to Qiang, Rossotto, and Kimura (2009), increased broadband access leads to accelerated economic growth as evidenced in the close link between information and communication technology (ICT) diffusion and firm-level productivity. Similarly, the World Economic Forum (2013) reported that digitization has created 6 million jobs globally and provided a $193 billion boost to world economic output in 2011. By 2020, about 20% of all jobs will be contracted online (World Bank 2013). While changes in the labor market will cause frictional unemployment, the McKinsey Global Institute (2011) found that internet access has helped small and medium-sized enterprises (SMEs) in eight developing countries to create 3.2 jobs for every job lost. Evidence also suggests the potential impact of e-commerce in reducing inequality among women (Box 1).

E-commerce lowers barriers to entry by eliminating certain costs related to having a physical storefront. It improves market access as it connects the supply side to the demand side without the traditional physical limitations and without certain transaction costs. According to UNCTAD, e-commerce helps local businesses access global value chains. It enables them to have a presence in foreign markets through exports and to tap foreign suppliers and receive goods through imports. This process leads to higher productivity because of more efficient use of technology, heightened competition, and greater consumer choice; and creates jobs as firms start to expand.

For example, digital channels provide opportunities where distance to markets is still a big barrier to trade. In the landlocked economies of Central Asia, e-commerce reduces trade costs by 60% compared with traditional trade. In India,

Box 1 Empowering women through information and communication technology

Women stand to benefit greatly from the adoption of policies that encourage e-commerce and online trade. While offline commerce is traditionally male dominated, the increased accessibility and reach provided by e-commerce will see marginally greater gains as it addresses the outmoded barriers to women's participation: geographic isolation and limited access to information and financing.

Given the importance of information and communication technology, it is not acceptable that there are 200 million fewer women internet users than men; of these women, 21% are less likely to own a mobile phone than men. Women also lag behind in other indicators of economic empowerment such as business bank account ownership, labor force participation rates, and savings account ownership. Knowledge regarding e-commerce and how technology may be leveraged to meet business needs is seriously lacking. A survey of women entrepreneurs showed that 41% had an internet-capable mobile phone, but only 16% had activated the internet services and only 6% used their phones for business.

Several programs that use technology to involve women in commerce are already under way. For example, an online mentoring platform pairs women entrepreneurs in developing countries with a partner in a developed country for mentoring and knowledge support by working together on specific business goals. Outsourcing services enable women to work from home by providing transaction and support services to a vast array of industries such as business processes, legal and medical transcription, translation, and editing, among others. In addition to being particularly beneficial in regions where women are highly educated, these services overcome geographic boundaries.

Mobile telephony, a lower-cost technology, is also used. For example, mobile phones are used to disseminate various types of information to women farmers, ranging from market prices to more specialized knowledge such as the correct use of sprays and fertilizers. In addition, mobile phone companies partner with women's committees to improve knowledge on using phones for commerce.

By promoting e-commerce, women may overcome the challenges in building a business—overhead and setup costs are lower when they are able to work from home, obtaining up-to-date information is easy, and access to an online market eliminates geographic limitations.

Source: S. Campbell. 2015. The Development Dimension of e-Commerce: The Potential of e-Commerce to Catalyze Women's Entrepreneurship. Presentation at The Development Dimension of Cross-Border eCommerce: Nourishing an Emerging Opportunity in CAREC. Wuhan, Hubei, People's Republic of China. 22–23 October.

98% of online firms engage in exports compared with only 9.6% of total firms. SMEs have reported an increase in trade activity as e-commerce gives them access to a wide variety of potential consumers (DiCaprio 2015).

Four types of transactions benefit from digitization: (i) the B2B type, in which online sales between enterprises, including those linked to outsourcing and offshoring, make up the bulk of transactions—SMEs need this online presence primarily to participate in value chains; (ii) the B2C type, which involves sales by "pure play" e-commerce enterprises and traditional brick-and-mortar firms that have added online sales channels—these firms reach target consumers through various online means such as social networks, crowdsourcing, dedicated websites, and mobile applications; (iii) the consumer-to-consumer (C2C) type such as eBay and Taobao; and (iv) the government-to-business (G2B) type such as various types of e-procurement.

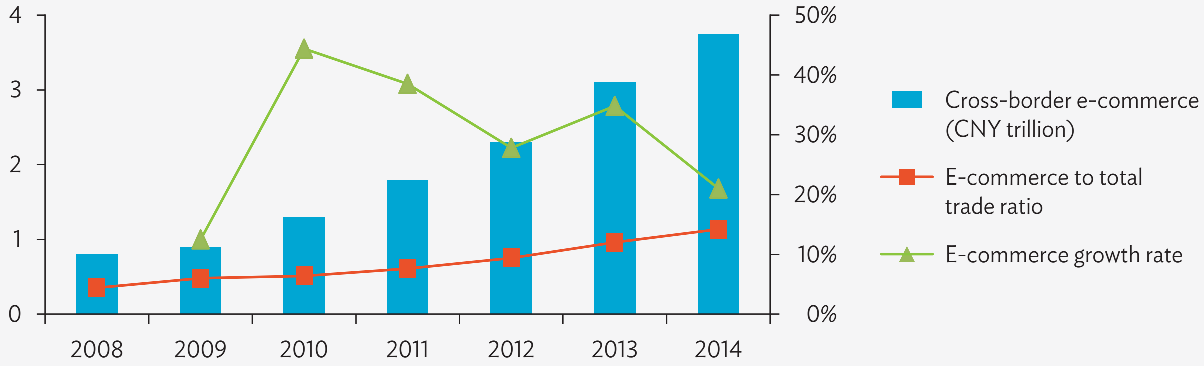
Unlike developed economies where digital transactions are commonplace, the digital economy remains diverse in developing countries. For example, in Asia, there are big players like the PRC (Box 2) and countries with a nascent digital economy like Cambodia and the Lao People's Democratic Republic. In fact, Asian firms lag behind their counterparts from other developing regions in using information technology and tools in their business (Figure 2). However, this is rapidly changing as national governments are increasing capacity through infrastructure investments and regulatory reform, multilateral organizations are working to improve access and develop global standards, and

Box 2 High-speed performance: e-commerce business in the People's Republic of China

Of the 649 million internet users and 557 million mobile internet users in the People's Republic of China (PRC), 361 million are online shoppers. China Central Television survey data (based on 100,000 families) show that 20.5% of respondents claimed to be involved in entrepreneurial activities in 2015, up from about 13.7% in 2014. The survey showed that e-commerce was the most promising industry classification with a 19.9% share of the total industries. The ratio of cross-border e-commerce to total trade volume in the PRC rose to 14.8% in 2014 from only 4.4% in 2008, consistently posting impressive double-digit annual growth in the same period. Combined, its internet-based peer-to-peer (p2p) and asset-to-peer (a2p) financial investment platforms exceed 3,000. In 2015, the expected total trading volume was at CNY1 trillion with the Anhui province-based eZubao moving an approximate CNY800 million a day.

To further expand its cross-border trade, the government has also initiated its "One Belt, One Road" strategy, which aims to strengthen infrastructure both on the land route from the PRC to the west through Central Asia, and on the maritime routes to the south through Southeast Asia and on to South Asia, Africa, and Europe. Locally, the PRC government is making concrete efforts in promoting e-commerce by creating 53 national e-commerce model cities, 34 e-commerce zones, and 500 special industrial parks throughout the nation. The government also encourages commercial activity of small and medium-sized enterprises as encapsulated by the slogan "popular entrepreneurship and innovation."

Fig. B2.1 Cross-border e-commerce to total cross-border trade ratio (2008–2014)



Source: M. Lee. 2015. Characteristics of the People's Republic of China's Cross-Border E-Commerce. Presentation at The Development Dimension of Cross-Border E-Commerce: Nourishing an emerging opportunity in CAREC. Wuhan, Hubei, People's Republic of China. 22–23 October.

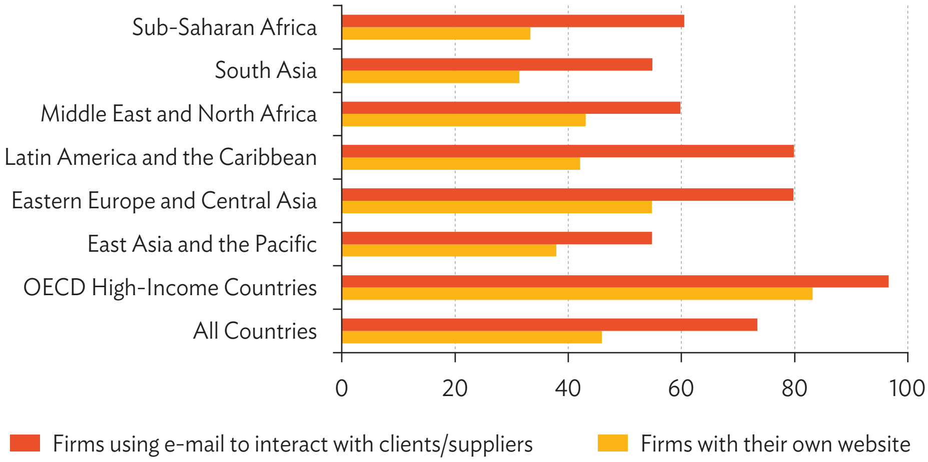
the private sector is driving innovations on making online transactions more sophisticated.

Industries and firms are also making adjustments in their business models to account for the shifting landscape. According to the International Federation of Freight Forwarders Associations (FIATA), freight forwarders are getting involved in the last part of delivery to the final consumer instead of only to manufacturers. Companies are beginning to work as e-commerce providers by offering comprehensive services ranging from traditional freight forwarding services, domestic logistics services, and traditional or bonded warehousing services to an online order/settlement platform. These companies are no longer solely focused on logistics coordination, but may also have carrier and/or storage companies or trading services. Some freight forwarding companies also serve as e-commerce suppliers based on their service scope and hardware capacity.

Key challenges

Despite the vast opportunities presented by a digital economy, Asia has yet to overcome challenges to fully realize its potential to harness e-commerce for sustainable development. In addition to the absence of national legislation

Fig. 2 Innovation and technology indicators (%)



OECD = Organisation for Economic Co-operation and Development.

Source: World Bank Group. Enterprise Surveys. http://www.enterprisesurveys.org/ (accessed March 2016).

to support cross-border e-commerce, developing countries in Asia face barriers related to poor ICT infrastructure, trade facilitation and logistics, e-payments, and inadequate skills development. National strategies to understand the underpinnings of e-commerce are also lacking in many countries.

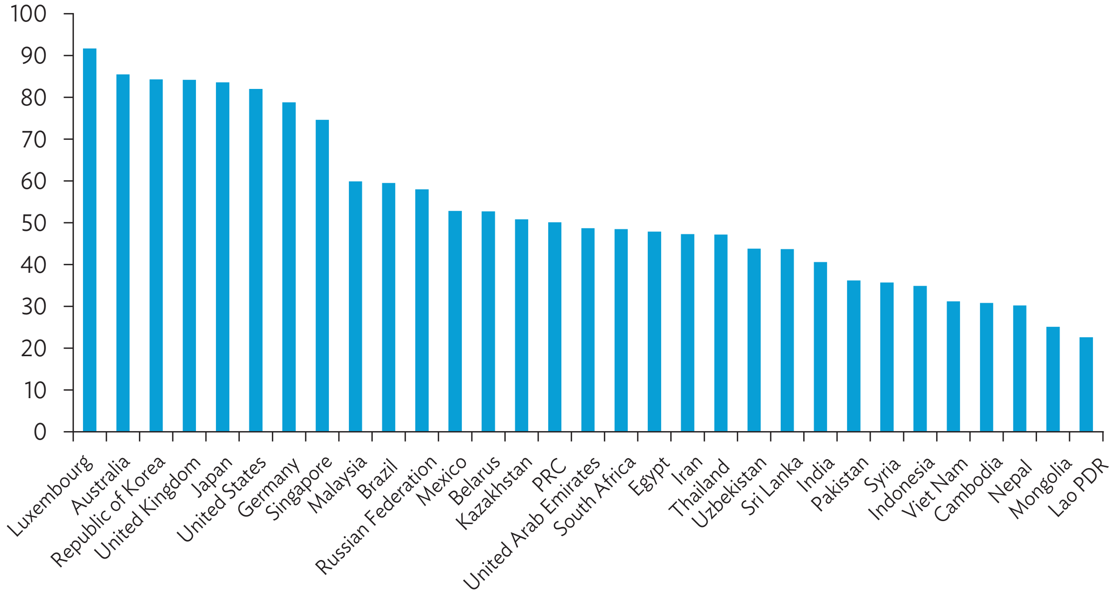
Even as Asia's developing countries further strengthen their capacity for e-commerce, most of them face institutional issues, such as complicated border clearance procedures and red tape, and disharmonized customs requirements between states hinder intra-regional trade. Market-related risks—such as fraud, costs of adaptation, and a risk of crowding out—also serve as barriers to entry.

Governments must balance short-term costs—such as the risk of losing tax revenue, the risk of job losses, and the risk of widening divides—against potential long-term gain. Typically, most developing economies are plagued by inadequate ICT infrastructure and power supply, limited credit card usage as a payment option, underdeveloped financial systems, and a lack of purchasing power, which must first be addressed for an online economy to function well.

Certain sociopolitical barriers must also be overcome, such as weak legal and regulatory frameworks relating to online transactions and cybercrime, cultural preferences for face-to-face interaction, and the society's reliance on cash. Last, cognitive obstacles such as poor ICT literacy and lack of awareness and knowledge of e-commerce must also be addressed (Kshetri 2007).

"Governments must balance short-term costs—such as the risk of losing tax revenue, the risk of job losses, and the risk of widening divides—against potential long-term gain."

Fig. 3 **United Nations Conference on Trade and Development B2C E-Commerce Index 2014** (selected countries)



B2C = business-to-consumer, Lao PDR = Lao People's Democratic Republic, PRC = People's Republic of China.

Source: United Nations Conference on Trade and Development (2015).

For the private sector, FIATA identified physical challenges as well: (i) long-distance delivery involving more checkpoints, segments, and coordinators, results in a complicated process that requires precision; (ii) providing logistics transportation plans to suit FIATA users' different needs; and (iii) transparency is a major concern as users want to know the status of their goods at all times. The World Customs Organization shows that data quality is a concern as many customers who send goods by international shipment are occasional shippers and are often not fully conversant with the requirements to ensure data quality.

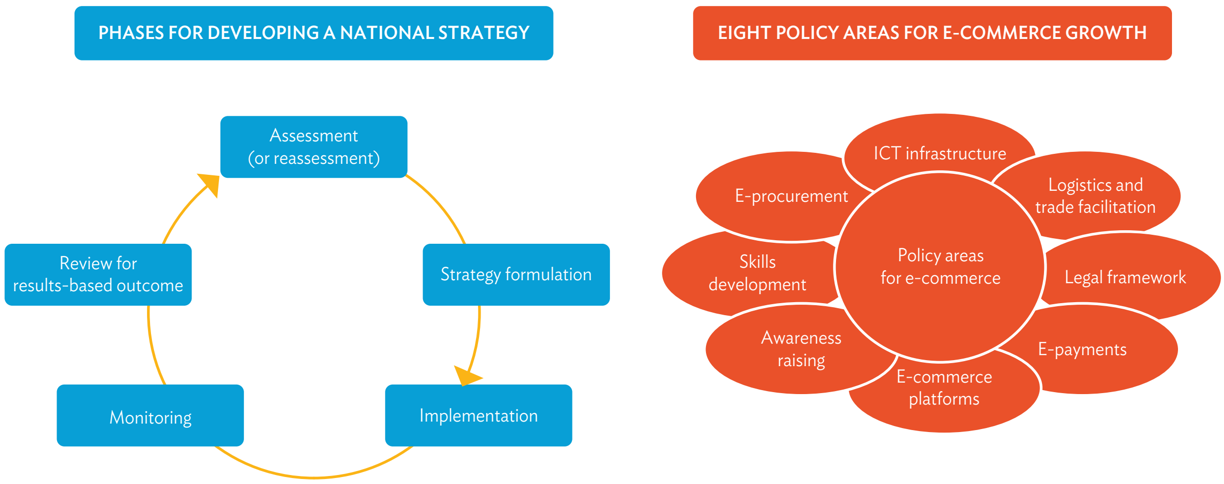
Policy options and strategies to support e-commerce

Given the challenges and diversity of e-commerce penetration in Asia (Figure 3), it is crucial for countries to develop national strategies that include measures to increase awareness of e-commerce and its benefits across various stakeholders, to open the door for greater participation by individuals and businesses.

For the government, more concerted efforts are needed to ensure a comprehensive review of priorities with

"The World Customs Organization shows that data quality is a concern as many customers who send goods by international shipment are occasional shippers and are often not fully conversant with the requirements to ensure data quality."

Fig. 4 Strategic framework for promoting e-commerce



ICT = information and communication technology.
Source: UNCTAD (2015).

regard to e-commerce as well as to institute profound policy and structural reforms with broader stakeholder participation. UNCTAD (2015) suggests that policies that support infrastructure, e-payment solutions, human resources, and the legal framework should be among the goals (Figure 4). To facilitate cross-border e-commerce, international cooperation and coordination between different countries and development partners are essential. For example, countries and development partners can work toward the standardization of simple, transparent, and effective processes for global business and the efficient and automated exchange of information to simplify e-commerce.

The private sector needs to focus on market infrastructure to support a digitally-driven economy. This means being able to develop new business models and encourage innovation to realize the full impact of digital connectivity in well-functioning markets. Concerns regarding online privacy; quality of goods and the associated guarantees on return; logistics and transportation; and inadequate payment systems from the consumer side should be addressed completely. On the production side, issues relating to payment processing capabilities, logistics and transportation concerns, and high adjustment costs undermine the positive impact of e-commerce in business operations and should be prioritized.

Finally, individuals and firms should be willing to educate themselves and acquire the necessary knowledge to make them accountable for implementing the e-commerce initiatives provided by the government and the private sector.

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