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INFORMATION ECONOMY REPORT 2015

Unlocking the Potential of E-commerce for Developing Countries

OVERVIEW



UNITED NATIONS



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NOTE

Within the UNCTAD Division on Technology and Logistics, the ICT Analysis Section carries out policy-oriented analytical work on the development implications of information and communications technologies (ICTs). It is responsible for the preparation of the *Information Economy Report*. The ICT Analysis Section promotes international dialogue on issues related to ICTs for development, and contributes to building developing countries' capacities to measure the information economy and to design and implement relevant policies and legal frameworks.

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PREFACE

The 2015 edition of UNCTAD's *Information Economy Report* examines electronic commerce, and shows in detail how information and communications technologies can be harnessed to support economic growth and sustainable development.

Electronic commerce continues to grow both in volume and geographic reach, and is increasingly featured in the international development agenda, including in the World Summit on the Information Society outcome documents and in the outcome of the ninth Ministerial Conference of the World Trade Organization.

The *Information Economy Report 2015* highlights how some of the greatest dynamism in electronic commerce can be found in developing countries, but that potential is far from fully realized. The report examines opportunities and challenges faced by enterprises in developing countries that wish to access and use e-commerce. It highlights the latest market trends, benchmarks country performances with the UNCTAD E-commerce Index, reviews examples of e-commerce in rural areas and low-income countries, addresses relevant legal issues and provides policy recommendations.

As the world looks ahead to implementing a new agenda for the next generation of our development work, I commend this report to all those seeking to help unlock the potential of e-commerce for developing countries.

A handwritten signature in black ink, reading "Ki-moon Ban". The signature is written in a cursive style with a long vertical stroke extending downwards from the end of the name.

BAN Ki-moon
Secretary-General
United Nations

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OVERVIEW

Global e-commerce is expanding fast with developing economies gaining prominence

The *Information Economy Report 2015* examines opportunities and challenges faced by enterprises in developing countries that want to engage in electronic commerce (e-commerce). As online transactions are increasingly embraced by enterprises and consumers, the global landscape is rapidly changing, with developing countries as a group assuming a more prominent role as both buyers and sellers of goods and services online.

It is estimated by UNCTAD that the value of global business-to-business (B2B) e-commerce in 2013 exceeded \$15 trillion, with more than three quarters of the total accounted for by, in order of magnitude, the United States of America, the United Kingdom of Great Britain and Northern Ireland, Japan and China. The importance of e-commerce increased substantially in the past decade. In the United States, for example, its share in total manufacturing revenue surged from 19 per cent in 2002 to more than half in 2012.

Global business-to-consumer (B2C) e-commerce accounted for an estimated \$1.2 trillion in 2013. While still considerably smaller than B2B, this segment appears to be growing faster. In developing countries, B2C e-commerce is rapidly expanding, particularly in Asia and Africa. China has already emerged as the largest global market for B2C e-commerce – measured both by online buyers and by revenue. The share of the Asia and Oceania region in global B2C e-commerce is expected to surge from 28 to 37 per cent between 2013 and 2018, and that of the Middle East and Africa to increase slightly from 2.2 to 2.5 per cent. Conversely, the combined share of Western Europe and North America is expected to fall from 61 to 53 per cent.

International postal deliveries of small packets and parcels have seen rapid growth in the past few years, mainly as a result of cross-border e-commerce. The volume of such trade rose by 48 per cent between 2011 and 2014. During this period, the share of developed countries as senders dropped from more than 70 per cent to less than 60 per cent. Developed countries and the Asia and Oceania region show significant trade surpluses in related deliveries, while the opposite is true for other regions.

The report outlines key opportunities and challenges of e-commerce ...

A number of proven and potential benefits are presented by B2B and B2C e-commerce, such as enhanced participation in international value chains, greater market access and reach, and improved internal and market efficiency, as well as lower transaction costs. It may spur job creation in the information and communications technology (ICT) sector and in enterprises that become more competitive thanks to online procurement and sales. New evidence from Europe presented in the report points to significant productivity gains from selling over the Internet and indicates that such effects are larger for smaller enterprises and in services industries.

But benefits from e-commerce do not accrue automatically and this form of trading also raises challenges for some existing players. With the entrance of competitors offering new product features and customer services, e-commerce redefines the marketplace. For example, traditional “bricks-and-mortar” stores increasingly need to adapt to enhanced price transparency and competition by providing new online sales channels, investing in new equipment and services, building complementary skills and revising their business strategies. The transition to online sales is not an easy task and even leading retailers of the world have wrestled with this challenge. There may also be a risk that technology-savvy foreign competitors outdo local firms, gaining greater market shares from e-commerce compared to local ones. Trade online has expanded the number of incidents and geographic reach of certain crimes and fraudulent activities. Governments may, furthermore, be concerned with tax erosion and transfer pricing.

... as well as major barriers and drivers, especially for micro and small businesses

A number of factors act as potential constraints on e-commerce. Economic barriers include inadequate ICT infrastructure and use, unreliable and costly power supply, limited use of credit cards, lack of purchasing power and underdeveloped financial systems. Sociopolitical barriers include weak legal and regulatory frameworks (which influence whether people and enterprises trust online transactions), cultural preferences for face-to-face interaction, and reliance on cash in society. And cognitive obstacles, finally, include low levels of ICT literacy, awareness and knowledge related to e-commerce among both consumers and enterprises. Thanks to changes in the “e-commerce ecosystem” – the network of actors, institutions and infrastructure that forms the environment required for effective e-commerce – some of these barriers are today easier to overcome.

Although most micro and small enterprises in developing countries have yet to start buying or selling products online, recent developments are expanding their chances of seizing benefits from e-commerce. First, connectivity has greatly improved, notably as a result of the widespread uptake of mobile telephony and social media, and rising levels of Internet use enabled by deployment of international and national fibre-optic networks. Second, new applications, platforms and services are lowering the barriers to entry. Third, new payment solutions provide wider choice for both enterprises and consumers to conduct transactions online. Fourth, local e-commerce companies – sometimes backed by foreign investors – are rapidly appearing in developing countries, tailored to the needs and demands of local users. Fifth, there is growing readiness among enterprises and consumers to conduct business online as well as more awareness among Governments and lawmakers of the importance of relevant legislation and regulation to enhance trust online.

The UNCTAD B2C E-commerce Index: A new tool for measuring e-commerce readiness

To assess the readiness of countries for e-commerce, the report presents the new UNCTAD B2C E-commerce Index, covering data for 130 economies on four indicators: Internet use, secure servers, credit card penetration and postal delivery services. The UNCTAD B2C E-commerce Index value is strongly positively correlated to the variation in the share of individuals shopping online. It suggests that the highest e-commerce readiness is found in Luxembourg, Norway and Finland (table 1). Among developing and emerging economies, all front-runners are in East Asia: the Republic of Korea, Hong Kong (China) and Singapore.

Table 1. Top 10 countries in UNCTAD B2C E-commerce Index 2014, by region

Globally	Developing economies	Africa	Asia and Oceania	Latin America and the Caribbean	Transition economies
Luxembourg	Republic of Korea	Mauritius	Republic of Korea	Chile	The former Yugoslav Republic of Macedonia
Norway	Hong Kong (China)	South Africa	Hong Kong (China)	Uruguay	Serbia
Finland	Singapore	Egypt	Singapore	Trinidad and Tobago	Russian Federation
Canada	Bahrain	Tunisia	Bahrain	Brazil	Bosnia and Herzegovina
Sweden	Turkey	Morocco	Turkey	Argentina	Albania
Australia	Chile	Sierra Leone	Malaysia	Costa Rica	Georgia
Denmark	Uruguay	Zambia	Lebanon	Dominican Republic	Ukraine
Republic of Korea	Trinidad and Tobago	Madagascar	China	Mexico	Armenia
United Kingdom	Malaysia	Zimbabwe	United Arab Emirates	Bolivarian Republic of Venezuela	Belarus
Israel	Brazil	Mali	Islamic Republic of Iran	Colombia	Republic of Moldova

Source: UNCTAD.

The Index allows countries to compare their readiness with others and also indicates their relative strengths and weaknesses in different elements of the e-commerce process, such as the quality of Internet infrastructure and the availability of payment and delivery solutions. There is considerable variation at the regional level. For example, transition economies have a relatively high degree of home postal delivery, whereas credit card penetration is low compared with most developing regions. On the other hand, in Latin America and the Caribbean, and in Asia and Oceania, there is scope for improving the coverage of postal home delivery, and in Africa, performance is hampered by low overall Internet penetration levels compared with other regions.

Globally, credit card penetration has the lowest average value among the four indicators in the Index. Most retail e-commerce payments are still made via credit card, but the role of other methods is forecast to expand in the future. As a result, credit card use may become a less important determinant when alternative payment solutions gain traction. Mobile payments, for example, are expected to account for only 3 per cent of the value of e-commerce payments by 2017. However, they are already important in countries characterized by limited Internet use but well-functioning mobile money systems. In several African countries, mobile solutions represent the most viable infrastructure for e-services due to high degrees of financial exclusion, limited availability of fixed lines, cost of fixed lines and cost of the card infrastructure. In Kenya, online purchase payments from mobile phones accounted for 19 per cent of total e-commerce transaction value in 2012, a smaller share than for cash-on-delivery but larger than for credit card payments.

Most of the top e-commerce companies are from the United States and China

The emerging e-commerce landscape is featuring a growing number of enterprises offering global solutions as well as services that are carefully tailored to the local environment. Among the global players, a number of specialized e-commerce companies with web sales only play a prominent role in the market. Some of the largest such companies by online revenue are Amazon.com (United States), JD.com (China), Dell (United States) and Jia.com (China). In addition to these, several global platforms allow individuals and small businesses to offer their goods and services online, such as the Alibaba Group (China), eBay (United States) and Rakuten (Japan). In terms of gross merchandise value, the top e-commerce sites in the world in 2013 were the Alibaba Group, followed by Amazon and eBay.

E-commerce platforms with strong presence around the world, such as Amazon, eBay, Alibaba and OLX, provide solutions to many small enterprises. They can facilitate access to international markets, carry out trading, and organize shipping and financial transactions within and beyond national borders. However, merchants in developing countries do not always enjoy equal access to these services. For example, only in one developing country (India) are merchants able to register as sellers on Amazon. In the case of eBay, users can register to sell on its platform in 24 United Nations Member States, including nine developing countries. Other eBay sites allow for buying but not selling. Such asymmetric access to marketplaces may accentuate existing imbalances in e-commerce trade as it is easier to export from one country to another.

But new entrants offer locally tailored solutions in developing countries

The absence of global platform providers creates scope for local players to fill the void. In sub-Saharan Africa, for example, various e-commerce solutions have been adapted to develop commerce over feature phones. There are thousands of e-commerce start-ups throughout the continent, but only a handful have reached significant scale. Many new e-commerce payment gateways have also appeared. Meanwhile, in Asian least developed countries, such as Bangladesh and Cambodia, new e-commerce sites are targeting the domestic market, enabling consumers to browse and order products online.

Global mapping of e-commerce legislation highlights progress and gaps

Buying and selling online raise legal challenges that have to be addressed by both Governments and the industry itself. This applies to domestic e-commerce and even more to international transactions. Even in developed regions, different legal requirements set in national laws hamper cross-border e-commerce. Despite significant progress in the adoption of laws, and to some extent legal harmonization in many regions, there is a need to align laws with international legal instruments. Furthermore, several Governments, especially in developing countries, need to adopt baseline laws in legal areas where they do not exist and ensure enforcement.

The *Information Economy Report 2015* maps the availability of national legislation in four key areas of cyber legislation: e-transactions, consumer protection online, data protection and privacy, and cybercrime. Relevant laws in these areas are mostly in place in developed countries, but in many other parts of the world the availability is inadequate. The share of countries that have adopted a law is generally highest for e-transactions and lowest for the protection of consumers online. Patterns vary by region (table 2). For example, in Central America, seven out of eight countries have consumer protection legislation in place, but more than half of the countries lack laws related to data protection and cybercrime. The subregion with the weakest coverage of e-commerce legislation is Middle Africa, where only two out of nine countries have e-transactions, consumer protection online and data protection laws, and only one country has adopted cybercrime legislation.

Table 2. Share of economies with relevant e-commerce legislation, by region, 2014 (per cent)

	Countries (number)	E-transactions laws (%)	Consumer protection laws (%)	Privacy and data protection laws (%)	Cybercrime laws (%)
Developed economies	42	97.6	85.7	97.6	83.3
Developing economies					
Africa	54	46.3	33.3	38.9	40.7
Eastern Africa	18	38.9	16.7	27.8	50.0
Middle Africa	9	22.2	22.2	22.2	11.1
Northern Africa	6	83.3	33.3	50.0	66.7
Southern Africa	5	60.0	40.0	20.0	40.0
Western Africa	16	50.0	56.3	62.5	37.5
Asia and Oceania	48	72.9	37.5	29.2	56.3
Eastern Asia	4	75.0	50.0	25.0	50.0
South-Eastern Asia	11	81.8	81.8	54.5	72.7
Southern Asia	9	77.8	22.2	44.4	66.7
Western Asia	12	91.7	33.3	25.0	58.3
Oceania	12	41.7	8.3	0.0	33.3
Latin America and the Caribbean	33	81.8	54.5	48.5	63.6
Central America	8	75.0	87.5	37.5	37.5
South America	12	83.3	75.0	66.7	75.0
Caribbean	13	84.6	15.4	38.5	69.2
Transition economies	17	100.0	11.8	88.2	70.6
All economies	194	74.7	47.4	55.2	60.3

Source: UNCTAD.

National strategies and international policies can help secure sustainable gains from e-commerce

As the digital economy expands and more business activities are affected, it is important to consider policies that can help to harness e-commerce for sustainable development. In this context, a national e-commerce strategy developed in collaboration with relevant stakeholders can play a useful role. Special attention may be devoted to measures to facilitate the effective involvement of micro and small enterprises.

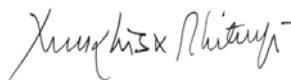
Assessing e-commerce readiness is a natural first step towards formulating an effective national e-commerce strategy and to set priorities. This involves developing an understanding of national needs, characteristics, strengths and weaknesses, using of tools such as the UNCTAD B2C E-commerce Index. Any assessment should include a comprehensive review of the evolution of e-commerce, including e-commerce-related initiatives, and a stocktaking of the resources and capabilities that could contribute to the development of e-commerce. This may require the collection of information through desk research and direct consultations with relevant stakeholders.

Properly identifying the main challenges and barriers and uncovering the dynamics underpinning them will help to ensure that policy measures adopted are effective. Key policy areas include the development of ICT infrastructure, logistics and trade facilitation, the legal and regulatory environment, e-payments, platforms and skills development in combination with an enabling international environment.

In the legal area, policy- and lawmakers need to take various actions. First, laws for e-signatures and e-contracting should be aligned to become internationally compatible. Second, consumer protection online should take into account ongoing efforts by the Organization for Economic Cooperation and Development and the United Nations to update the international guidelines on consumer protection. Third, the establishment of minimum standards in regard to data protection and cybercrime could help ensure cross-border coordination on the design and implementation of relevant legislation and stronger enforcement institutions. Fourth, as cyber legislation is still a relatively new field of law in large parts of the developing world, further efforts are needed to strengthen the capacity of lawmakers and the judiciary. Finally, there is a need for raising the awareness about existing cyber legislation among all stakeholders.

At the international level, special attention is warranted in the areas of international trade rules, taxation and support to capacity-building in developing countries. E-commerce features in the international development agenda, in outcome documents on the “vision beyond 2015” for the World Summit on the Information Society, as well as in the outcome of the Bali Ministerial Conference of the World Trade Organization. International declarations accord in that there remains ample scope for making e-commerce more inclusive and beneficial.

Further shifts from offline to online commerce are expected in the coming years. This will continue to change the ways in which consumers and enterprises interact. Some are better equipped to adapt to such transformations. From a policy perspective, it is important to create an environment that provides more equal opportunities for stakeholders in different locations and areas of society to take part in the process. In this context, international cooperation and effective dialogue between policymakers and other stakeholders will remain instrumental.



Mukhisa Kituyi
Secretary-General of UNCTAD

