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Fostering development gains from domestic and cross-border e-commerce in developing countries

Fostering development gains from e-commerce and digital platforms

Note by the UNCTAD secretariat

Executive summary

This note addresses the role of digital platforms for electronic commerce (e-commerce) in developing countries. Such platforms can offer opportunities to connect different parts of a country, as well as with other countries. Connectivity is particularly important for rural and remote areas. Recent e-commerce trends, the nature and implications of digital platforms, the role of local platforms in developing countries and the main barriers to e-commerce and participation in digital platforms in developing countries are also considered. The note concludes with a policy discussion based on the guiding questions decided by member States at the first session of the Intergovernmental Group of Experts on E-commerce and the Digital Economy in October 2017.

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Introduction

1. In the agreed policy recommendations of the first session of the Intergovernmental Group of Experts on E-commerce and the Digital Economy held on 4–6 October 2017, member States decided that the policy focus of the second session would be on fostering development gains from domestic and cross-border e-commerce in developing countries (TD/B/EDE/1/3).

2. New digital solutions, including for e-commerce, are creating new opportunities for companies of all sizes to engage in domestic and international trade, notably by increasing market access for customers, supply chains and competitors, and by reducing trade costs. This is affecting microenterprises and small and medium-sized enterprises (MSMEs) in countries at all levels of development, but in different ways. Potential benefits for developing-country companies and consumers range from greater efficiencies to deeper specialization and division of labour, greater gains from variety and predictability for all players, as well as lower costs and prices of inputs and final products. Digital technologies can also be used to empower women entrepreneurs.

3. However, such gains are not automatic. In order to harness digitalization in support of trade, investments in information and communications technology (ICT) infrastructure should be complemented by an appropriate set of regulations and institutions, and support for skills development. Current gaps in terms of e-commerce readiness, between and within countries, imply that benefits from e-commerce are not equally distributed.

4. Member States decided upon the theme for the second session and agreed on the following guiding questions:

(a) How can developing countries foster local platforms for domestic and cross-border e-commerce?

(b) What are the existing barriers related to international e-commerce platforms that developing countries, including the least developed countries, face, and how can these barriers be overcome?

(c) What are some of the operational constraints that small and medium-sized businesses in developing countries face when setting up trade online, and how can they be overcome?

(d) What are the good practices that developed and developing countries, including the least developed countries, can learn from each other?

5. The first section reviews recent developments related to e-commerce, highlighting the growing role of digital platforms and potential implications for policy. The second section examines barriers to accessing international e-commerce platforms, and the third deals with operational constraints that may affect the ability of MSMEs wishing to trade online. The fourth and last section reflects on the aforementioned guiding questions.

I. Trends in e-commerce and the role and implications of digital platforms

A. Recent e-commerce trends

6. E-commerce, though a prominent feature of the evolving digital economy, remains hard to measure. UNCTAD estimates that global e-commerce sales amounted to $25.3 trillion in 2015 – $22.4 trillion for business-to-business e-commerce, and $2.9 trillion for business-to-consumer e-commerce.[1] Their annual share in total world gross domestic product is used as a basis for deriving a global estimate. An indication of the rapid expansion of e-commerce is the number of online shoppers in the world, which rose from less than 600 million in 2010 to about 1.2 billion in 2016.[2] A recent estimate suggests that there are some 2 million to 3 million e-commerce companies in the world (excluding China), of which some 1.3 million are in the United States of America and Canada.[3] The majority of companies that sell online also sell offline.

7. While most e-commerce takes place domestically, individuals and enterprises ordering or selling goods and services online across borders contribute to international trade. UNCTAD estimates that cross-border business-to-consumer e-commerce in 2015 amounted to $189 billion, and that some 380 million consumers made purchases on overseas websites.[4]

8. The *UNCTAD Business-to-Consumer E-commerce Index 2017*[5] reveals that the e-commerce divide is considerable. In most of the least developed countries, the share of Internet shoppers in the population is 2 per cent or less, and in many developed countries, it is around 60–80 per cent. The top 10 economies in the index are mainly developed countries, with relatively similar index values. The index showed more variation among the top 10 developing economies. Regional scores for Africa and Latin America are below the world index average.[6]

9. The lack of e-commerce data and statistics for most developing countries represents a barrier to the formulation and implementation of evidence-based policies in relevant areas. Private enterprises also need e-commerce statistics to make informed investments and strategic decisions. The possible establishment of the Working Group on Measuring E-commerce and the Digital Economy proposed at the first session of the Intergovernmental Group of Experts on E-commerce and the Digital Economy could provide for a useful forum for further discussion on how to address this challenge.

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[1] UNCTAD, 2017a, *Information Economy Report 2017: Digitalization, Trade and Development* (United Nations publication, Sales No. E.17.II.D.8, New York and Geneva).

[2] See http://unctad.org/meetings/en/Presentation/tdb_ede2017p05_TFredriksson_en.pdf (accessed 5 February 2018).

[3] See http://blog.pipecandy.com/e-commerce-companies-market-size/ (accessed 5 February 2018).

[4] UNCTAD, 2017a.

[5] UNCTAD, 2017b, *UNCTAD B2C [Business-to-Consumer] E-commerce Index 2017*, UNCTAD Technical Notes on ICT for Development No. 9 (United Nations publication, Geneva).

[6] The e-commerce readiness of the least developed countries is assessed in the UNCTAD rapid eTrade readiness assessments (see assessments of Bhutan (UNCTAD/DTL/STICT/2017/1), Cambodia (UNCTAD/DTL/STICT/2017/2), Nepal (UNCTAD/DTL/STICT/2017/11) and Samoa (UNCTAD/DTL/STICT/2017/10).

B. E-commerce in the overall digital platforms landscape

10. Various forms of digital platforms play a central role in the evolving landscape for e-commerce and the digital economy.[7] There are different kinds of platforms but there is no universal consensus on how best to classify them. For example, a given product platform, such as the smartphone, which has emerged from a complex platform ecosystem, is in turn harnessed as a mobile platform for the delivery of higher-level product platforms, such as mobile social networking or e-commerce.

11. There is some confusion about the terminology used in relation to various digital platforms. Concepts such as the platform economy, sharing economy, collaborative economy, on-demand economy, peer-to-peer economy, gig economy, crowd-based capitalism and others, tend to be used interchangeably when referring to the new business models facilitated by digital platforms.[8] For example, the sharing or collaborative economy originally involved sharing assets or time. Examples included not-for-profit online car-pooling services with users sharing the costs, and online systems for swapping houses between owners during holidays.

12. By contrast, in the case of companies that today are often associated with the sharing economy, such as Airbnb, Didi Chuxing or Uber, an exchange of money is generally involved, and often the creation of some form of employment. Thus, the term “sharing economy” can be misleading in such instances. When an individual or a firm uses a platform to obtain an income from an idle resource or asset, the function of the new business model is to extend the market to these resources or assets. Airbnb and Uber are basically offering commercial transportation and accommodation services over online booking systems – thus enabling e-commerce.[9]

13. The figure below illustrates the new landscape emerging from digital platforms. These are divided into two groups: profit-oriented and non-profit-oriented platforms. The size of non-profit-oriented digital platforms is likely to be marginal compared with profit-oriented platforms. Some examples of the different categories are provided. The proposed representation does not claim to be exhaustive and should be considered work in progress. Uber is categorized both as e-commerce (the transportation service is ordered online) and gig work (the work delivered is location bound). Similarly, Airbnb enables e-commerce (accommodation ordered online) and is representative of gig work. Given that some platforms are multipurpose, they could appear in several places in the following figure.

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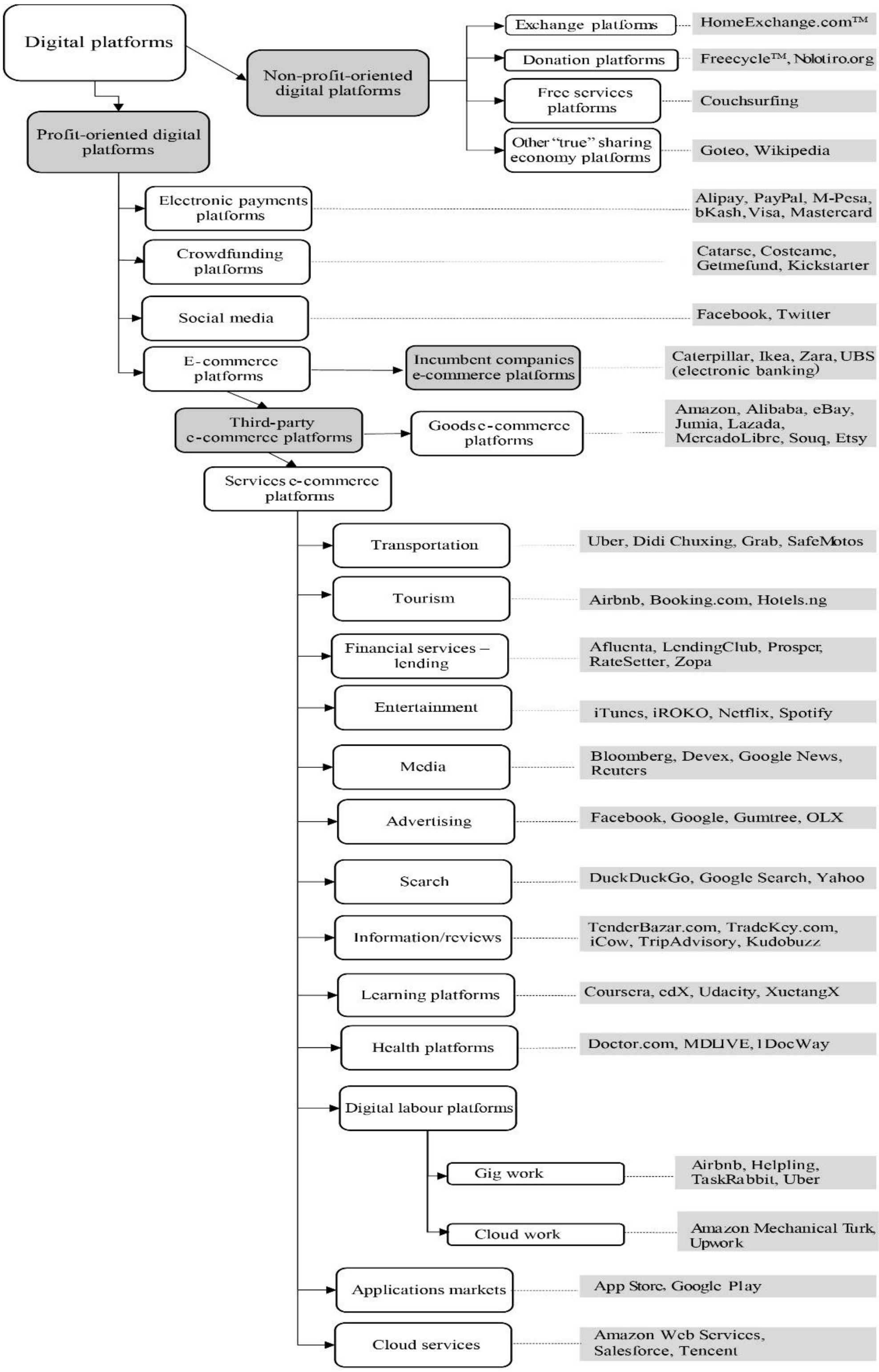
[7] UNCTAD, 2017a.

[8] See R Botsman, 2013, The sharing economy lacks a shared definition, available at https://www.fastcompany.com/3022028/the-sharing-economy-lacks-a-shared-definition; R Botsman, 2015, Medium, The sharing economy: Dictionary of commonly used terms, available at https://medium.com/@rachelbotsman/the-sharing-economy-dictionary-of-commonly-used-terms-d1a696691d12 (both sources accessed 12 February 2018).

[9] In December 2017, the Court of Justice of the European Union ruled that Uber was a transportation service company.

E-commerce in the digital platforms landscape



Source: UNCTAD.

14. Depending on the agents or users involved in a transaction, digital platforms can be peer to peer, consumer to consumer, business to business, business to consumer or business to government. There are several other typologies of platforms, following different criteria. For example, Srnicek (2017) distinguishes between advertising platforms (for example, Facebook or Google), cloud platforms (for example, Amazon Web Services), industrial platforms (for example, General Electric, Siemens), product platforms (for example, Rolls Royce, Zipcar) and lean platforms (for example, Airbnb or Uber).[10] In contrast, JP Morgan (2016) makes a distinction between labour and capital platforms,[11] and Evans and Gawer (2016), [12] between transaction, innovation, integrated and investment platforms. The usefulness of such categorizations depends on the purpose for which they are used.

15. By reducing transaction and search costs, as well as frictions, digital platforms enable those offering assets or services to connect more easily with those wishing to consume them. This has created opportunities for new types of trade (in digitally traded products, services and tasks), as well as for more traditional trade using e-commerce and other online platforms to better match buyers and sellers and make products more visible. Many of them provide access to either free or paid services via the Internet to connect users, buyers and sellers, such as services related to logistics, payments, market research, trade compliance, data for market intelligence, advertising, refunds and dispute resolution.

16. Platforms allow for a more efficient utilization of physical assets or time. Often accessed through mobile applications, they bring together and aggregate demand and supply in ways that were not possible before (faster, cheaper and more easily coordinated), including in geographical areas and service sectors where lower density has acted as a barrier.

17. The use of digital platforms is growing, especially in sectors facing strong global competition and involving many buyers and sellers. Their emergence may have been favoured by macroeconomic trends in the global economy since the 1970s. These include fiscal austerity, tax evasion, cost reductions and outsourcing, as well as loose monetary policy characterized by increasingly low interest rates in the United States since the 1990s, and particularly quantitative easing since the global financial crisis of 2008. As a result, large amounts of money seeking higher returns have been invested in equity in technology companies often relying on digital platforms of various kinds.[13]

18. Among the main characteristics of digital platforms are the provision of infrastructure to intermediate between different user groups; reliance on network effects as more users beget more users, leading to monopolistic trends; and the use of cross-subsidization. [14] Platforms also tend to outsource jobs and services. Moreover, platform owners set the rules of product and service development, as well as marketplace interaction, that is, access conditions and prices.[15] The most important value of digital platforms stems from data extracted from users that can be further analysed, used and sold to third parties. Data have indeed become a valuable extractable resource in the digital economy.

[10] N Srnicek, 2017, *Platform Capitalism* (Polity Press, Cambridge, United Kingdom of Great Britain and Northern Ireland).

[11] JP Morgan Chase and Company, 2016, *Paychecks, Paydays and the Online Platform Economy: Big Data on Income Volatility*.

[12] P Evans and A Gawer, 2016, The rise of the platform enterprise: A global survey, The Emerging Platform Economy Series No. 1, The Centre for Global Enterprise.

[13] Srnicek, 2017.

[14] Cross-subsidization is a practice whereby one arm of a firm reduces the price of a good or service, which is compensated by an increase in prices in another arm.

[15] Srnicek, 2017.

C. Role of online platforms in developing countries for domestic and cross-border e-commerce

19. There are different ways for MSMEs to gain an online presence to market their goods and services to potential buyers in their own country or in foreign markets. The introduction of digital platforms has lowered some traditional obstacles, such as the need for in-house resources, information technology equipment and expertise to establish and maintain a web presence.[16]

20. One option is to use third-party online marketplaces. Some provide a full range of services – payment processing, customer service, shipping, return processing and delivery – while others act mainly as an online forum for buyers and sellers to meet; transactions are carried out offline. The primary focus of these marketplaces may be business to business, business to consumer or consumer to consumer. They often specialize in certain types of products, such as physical goods, digital products or ICT-enabled services. The geographical focus of such marketplaces is also important. International online marketplaces may be open solely to international sellers, to international buyers, or both. In countries with expanding e-commerce markets, domestic and international platform providers often compete head to head.

21. Another option is to set up a stand-alone e-commerce site. This can be done, for example, by adding an e-commerce function to an enterprise's existing website, by using a software-as-a-service e-commerce solution with a package of what is needed to operate e-commerce, or by building a customized e-commerce site. These options differ in terms of resource requirements, flexibility and need for in-house skills and capabilities.[17]

22. A few major online marketplaces have captured significant parts of the overall market, benefiting from economies of scale and network effects. Leading e-commerce platforms include the Alibaba Group, Amazon, eBay and Rakuten. However, in many developing countries, such platforms are complemented by national or regional ones. The development of a local e-commerce industry can provide convenience for residents through shorter shipping times, flexible payment options, relevant products and local language interface. Other potential advantages to the domestic real economy may include more linkages with local industries and suppliers, reduced reliance on imports and greater openness to support exports. A growing number of e-commerce platforms have emerged in developing countries, often with the help of foreign capital. Locally oriented platforms have sometimes been able to grow, in part owing to the absence of global competitors in the local market (box 1).

[16] UNCTAD, 2015, *Information Economy Report 2015: Unlocking the Potential of E-commerce for Developing Countries* (United Nations publication, Sales No. E.15.II.D.1, New York and Geneva).

[17] See UNCTAD, 2015.

Box 1
Selected e-commerce platforms in developing countries

The Alibaba Group, a Chinese company launched in 1999, has become one of the world's leading e-retailers. In addition to providing different e-commerce platforms, it has developed other services to facilitate e-commerce. The company's growth has been facilitated partly by government restrictions on foreign investment in e-commerce, which were only recently lifted, and the need for an appropriate Chinese language user interface, as well as for goods adapted to local demands.

Flipkart, an Indian business-to-consumer retailer, was established in 2007. It boasts 100 million users, 80 million products and 100,000 sellers, and ships 8 million items a month through 21 warehouses. It is facing increasing competition from Amazon, which launched operations in India in 2013.

The Jumia Group, founded in 2012, has a presence throughout Africa. With several companies as investors, it states that half a million local African companies are conducting business on its portals every day. It offers retail sales in 7 African countries, and its marketplace is available in 14 countries. Jumia House, an Airbnb-type service, is available in 21 countries. Jumia also offers logistics services in a dozen countries, including cash on delivery, warehousing and logistics solutions.

Lazada, based in Singapore, was launched in 2012 as an online retailer and marketplace. By June 2017, it was operating in six South-East Asian countries. Lazada ranks first in e-commerce website visits in five of the six countries in which it operates. It has benefited from its early entry into the market of the Association of the Southeast Asian Nations, ahead of large global e-commerce companies, and its portals have been adapted to the region's different languages and consumer preferences. The Alibaba Group became the majority owner of Lazada in 2016.

MercadoLibre, launched in 1999, is an e-commerce marketplace headquartered in Argentina, with operations in 18 Latin American countries. Between 2001 and 2016, eBay was its strategic shareholder. MercadoLibre offers a range of services, including logistics and payments, to support e-commerce. Given that most of the region is Spanish speaking, it has been relatively easy to develop common platforms. Nevertheless, each country has its own website, with no interaction with websites in the other countries.

Souq is a regional online retailer headquartered in the United Arab Emirates with operations in Egypt and the Gulf States. Since its launch in 2005, Souq has grown to host 70,000 vendors offering over a million products and employing over 2,000 people in 2015. Its success can be attributed to local contextualization, its switch from an auction site to a third-party site in 2011 and to sound logistics throughout the region. In 2017, it was acquired by Amazon.

Source: UNCTAD, 2017a.

23. The line between local and foreign platforms is becoming increasingly blurred. Local e-commerce platforms are often backed with foreign capital. Once local platforms achieve a certain level of scale, they become attractive acquisition targets for global players, as in the cases of Lazada and Souq (box 1). Moreover, due to the existence of network effects, local platforms may not be profitable before they reach a significant size in terms of users. In a situation where only 2–3 per cent of consumers buy online, it might not be worthwhile for some companies to engage in digital platforms. They may need to wait until the market exhibits some growth. On the other hand, if there are expectations of fast market growth, it might be advantageous to accept low or negative profitability for some time to reap first-mover advantages.

24. Participation in online platforms may be more useful for smaller firms that compete in specific, well-defined market segments, such as niche trading in tourism and in value added food products (for example, ethical goods). While such segments and markets may seem small, these kinds of online platforms can help producers reach more clients and achieve sufficient scale and income generation.[18]

25. In some developing countries, the absence of global platform providers creates scope for local players to fill the void. In sub-Saharan Africa, various e-commerce solutions have been developed to facilitate commerce over feature phones. There are thousands of e-commerce start-ups throughout the continent, but only a few have reached significant scale. Many new e-commerce payment gateways have also cropped up. In various low-income developing economies, new e-commerce sites are targeting the domestic market, enabling consumers to browse and order goods or services online.[19]

D. Implications of digital platforms

26. The use of digital platforms has economic, social and political impacts. Policymakers face challenges in relation to relevant policy areas, such as competition and consumer protection, data protection, taxation and labour relations. Some policies and regulations may need adaptation to the new digital context. Although it may appear that most of the activities involved in the platform-based economy are free from any regulation, as long as these are economic activities, there would appear to be no reason to separate them from other traditional economic activities that are subject to existing policies and regulations. Thus, they should be regulated in a manner consistent with a fair trading environment that is not biased towards or against any modality of trade and that provides equivalent protection to the rights of all parties involved – consumers, workers and taxpayers.

27. Winner-takes-all dynamics are typical in platform-based economies, where network effects benefit first movers and standard setters. Whoever controls the platform also controls the distribution channel, and this can give the dominant platform (and data) owner considerable market power. Indeed, the world's top four companies by market capitalization are all leveraging digital platforms: Apple, Alphabet (Google), Microsoft and Amazon.com.

28. Regarding competition and consumer protection issues, digital platforms have the potential to transform markets and enhance competition, while increasing consumer and overall welfare. However, they can be perceived by traditional enterprises as unfair competition, since platforms do not usually comply with the same regulatory requirements. Competition authorities around the world have advocated against excessive regulation of the platform economy, which may reduce its potential benefits.

29. The digital platform environment may lend itself to potential anticompetitive practices. As a result of network effects, platforms may gain market power and could abuse their dominant position, for example by imposing exclusivity arrangements on their providers or carrying out predatory pricing against competitors. However, in various competition cases involving platforms, they were not considered to hold dominance over the relevant market.[20]

[18] UNCTAD, 2017a.

[19] Examples include ClickBD and Bagdoom (Bangladesh); Shop.bt, gnhcorner.com and Bhutan Hangout (Bhutan); Grab (Cambodia); Hamrobazar, Daraz Nepal, NepBay, Sasto Deal and Muncha (Nepal); Metro Africa Express and Asuqu (Nigeria); SafeMotos (Rwanda); and Kapruka (Sri Lanka).

[20] India: *Meru Travel Solutions Private Limited v. Uber India Systems Private Limited* (2015), South Africa: *Uber vs. Metered Taxis* (2015).

30. Consumers have greatly benefited from the irruption of digital platforms through new and better suited offers, lower prices and more pertinent information. At the same time, the lack of face-to-face transactions entails greater risks for consumers with respect to disclosure and transparency, data protection and applicable law and responsibility of platforms and peer providers. As stated in the United Nations Guidelines for Consumer Protection, member States should ensure a level of protection in e-commerce that is “not less than that afforded in other forms of commerce,” which also applies to digital platforms.[21]

31. The digital economy relies increasingly on the generation, storage, processing and transfer of data, both within and across national boundaries. Access to data and data analysis are becoming strategically important for the competitiveness of companies. In relation to the use of digital platforms, there are concerns about how data flows can be harnessed, while at the same time addressing concerns related to privacy and security.[22]

32. Policymakers should balance the need for companies to collect and analyse data for innovation and efficiency gains, on the one hand, and the concerns of other stakeholders with respect to security, privacy and movement and ownership of data, on the other. The current system for data protection is fragmented, with varying global, regional and national regulatory approaches. In addition, many developing countries still lack legislation in this area altogether. Instead of pursuing multiple initiatives, it would be preferable for global and regional organizations to concentrate on one unifying initiative or a smaller number of initiatives that are internationally compatible.[23]

33, Policymakers in developing and developed countries alike face the challenge of taxation in the digital economy. Reliance on digital platforms may weaken the international tax concept that allocates jurisdictional tax claims over profits of multinational companies based on physical presence. It raises issues such as enforcement, where to tax non-resident e-commerce businesses, how to assess intra-group transactions, how to classify digital goods, how to identify taxpayers, and where and how to collect consumption tax. Whereas concerns related to tax implications from e-commerce are likely to be more pronounced in countries where the uptake of e-commerce is high, finding ways to address related concerns are of relevance to all countries.

34. Moreover, the digital economy could enable more tax planning and erosion, which reduce the availability of domestic resources for development.[24] In the European Union, domestic digitalized business models are subject to an effective tax rate that is less than half of that of traditional business models.[25]

35. Regarding employment and working conditions, the evolving digital economy has been accompanied by the rise of trade in tasks mediated by online labour platforms, such as Amazon Mechanical Turk and Upwork. This is creating new income-generating opportunities for people in developing countries who have adequate connectivity and relevant skills. The platforms enable web designers, coders, translators, marketers, accountants and other types of professionals to sell their services to clients abroad. Annually, some 40 million people access these platforms looking for jobs or talent. At the same time, the fragmentation of the production process and a large oversupply of jobseekers on such platforms may weaken their bargaining power and thus accentuate tendencies towards a race to the bottom in terms of compensation and other working conditions. It is important that policies and regulations enable this expanding segment of

[21] UNCTAD, 2016a, *United Nations Guidelines for Consumer Protection* (United Nations publication, New York and Geneva).

[22] See also PJ Singh, 2017, Developing countries in the emerging global digital order: A critical geopolitical challenge to which the global South must respond.

[23] UNCTAD, 2016b, *Data Protection Regulations and International Data Flows: Implications for Trade and Development* (United Nations publication, New York and Geneva).

[24] Srnicek, 2017.

[25] European Commission, 2017, Communication from the Commission to the European Parliament and the Council: A fair and efficient tax system in the European Union for the digital single market, 21 September.

the economy to provide quality and decent jobs.[26] More research is needed to assess the costs and benefits of online trade in tasks for both workers and enterprises, and to formulate appropriate policies and regulatory responses.

36. Digital platforms are matching tasks across the whole skills spectrum, from counting clicks to writing articles or coding. These platforms are transforming labour markets by favouring certain types of contracts (freelance and contract work over regular employment) and enabling the entry of new competitors. As a result, workers with high levels of social protection may find themselves in competition with workers in the domestic market or abroad with lower levels of social protection. This has implications for how benefits, health care and pensions are organized, and for the provision of training and education.

37. In a broad sense, economic policies and regulations should aim to maximize the benefits and minimize the costs of digital platforms. Digital platforms lead to efficiency gains derived from lower transaction costs and information asymmetries supported by rating systems, lower consumer prices, increased access to markets, more competition, better use of underutilized resources, flexibility for providers of services and benefits for the planet through more efficient use of resources (if reducing waste). However, there are concerns that the market power of certain platforms may lead to abuse of dominant positions, data protection and privacy issues, tax erosion and negative effects on jobs. Lower cost of consumption may increase the volume of resource use and carbon emissions. Moreover, net benefits can be unevenly distributed, which may call for redistribution policies.

38. As the focus of this note is on e-commerce, the following sections explore specific e-commerce-related issues.

II. Barriers to accessing international platforms for developing countries

39. Global online platforms are becoming increasingly important for MSME involvement in some value chains.[27] Direct sales of certain types of goods in international markets, such as intermediate products, gifts and retail food, can sometimes be more viable, particularly when they are differentiated or value added outputs.

40. For many developing-country firms, exporting by means of e-commerce platforms has been hampered by difficulties in evaluating the quality of firms, production processes and products, or by payment solutions being poorly integrated or inflexible. Newer generations of such platforms can partly overcome such barriers. They include more sophisticated ratings, as well as more viable payment options and guarantees that can provide stronger protection for both buyers and sellers, thereby helping to overcome lack of trust.

41. International e-commerce platforms are used by a growing number of small enterprises to market and sell various products. It is becoming easier for firms in lower-income developing economies to integrate, for example, with e-commerce sites such as Alibaba, Amazon Marketplace, eBay and TradeKey.com. Such platforms are extending their protection and coverage to support traders in a growing number of countries. This enables MSMEs to trade using a convenient payment system and platforms in their own language. With more widespread Internet access, such platforms are expected to become increasingly important channels for exports of intermediate and final goods. However, merchants in developing countries may face restrictions when wishing to make use of these services, and access to them remains uneven across the developing world.

[26] UNCTAD, 2017a.
[27] Ibid.

42. However, access to and use of global e-commerce, payments and applications market platforms vary. For example, UNCTAD noted that only in one developing country (India) were merchants able to register as sellers on Amazon.[28] When moving outside the United States, and especially beyond developed countries, the scope of services gradually narrowed.[29] Similarly, in the case of eBay, users were able to register to sell on its platform in 24 countries, including 9 developing countries. Other eBay sites allowed for buying but not selling. Such asymmetrical access to marketplaces may accentuate existing imbalances in e-commerce trade, as it makes it easier to export from one country to another. A common factor limiting access to e-commerce platforms is the lack of cross-border payment solutions, such as PayPal. In 2017, PayPal business accounts were available in more than 100 countries, but unavailable in most low-income developing economies. While global e-commerce platforms provide integrated payments solutions, in many African countries, companies cannot use them because they lack the requisite foreign bank account or subsidiary.[30]

43. Similar asymmetries have also been observed with regard to mobile applications in sub-Saharan Africa. In one study, Nigeria was the only country in the region in which users and developers were able to buy and sell Android applications as in developed countries.[31] In 22 countries, users were able to download free and paid applications; however, developers could only upload free applications but could not generate revenue from them. In most countries, developers had no options, and it was not clear whether users could even download free applications. This implies that applications are not available to all, and that far from all developers can leverage the marketplace to earn a living. Moreover, the largest advertising platforms, such as Google AdSense, do not accept advertisements in any African languages except Arabic, English, French and Portuguese, reducing the potential to monetize new services.[32]

III. Operational constraints faced by small and medium-sized businesses in developing countries when setting up online trade

44. 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 logistics and 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. Cognitive obstacles are low levels of ICT literacy, awareness and knowledge related to e-commerce among consumers and enterprises. Box 2 describes the common barriers faced by MSMEs when engaging in e-commerce.[33] The following sections focus in particular on Internet access, payment solutions, logistics and delivery, and quality standards.

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[28] UNCTAD, 2015.

[29] According to Amazon, 103 countries were accepted for seller registration but only 64 countries were supported by the Amazon currency converter for disbursement (https://www.amazon.com/gp/help/customer/display.html?nodeId=200417280 and https://www.amazon.com/gp/help/customer/display.html?nodeId=200497820, accessed 6 February 2018).

[30] International Trade Centre, 2016, *Bringing SMEs [Small and Medium-sized Enterprises] onto the E-Commerce Highway* (International Trade Centre, Geneva).

[31] M Kende, 2015, The mobile app [applications] divide, Discussion Paper No. 1, Internet Society.

[32] M Kende, 2017, Promoting the African Internet Economy, Internet Society.

[33] See UNCTAD, 2015; International Telecommunication Union, 2016, *Measuring the Information Society Report* (Geneva); and J Meltzer, 2014, Supporting the Internet as a platform for international trade: Opportunities for small and medium-sized enterprises and developing countries, Global Economy and Development Working Paper 69, Brookings.

Box 2

Critical barriers faced by microenterprises and small and medium-sized enterprises in cross-border e-commerce

A number of barriers prevent MSMEs in developing countries from effectively engaging in e-commerce. The barriers listed below are taken from an assessment undertaken by the International Trade Centre:

- Lack of awareness, understanding or motivation among policymakers, trade and investment support institutions and MSMEs about opportunities for increased trade online and how to overcome related barriers.
- Lack of access, affordability and skills with respect to relevant technologies. Many MSMEs do not master technology or they lack relevant skills. Even those able to access online marketplaces may lack competence in using complementary technologies such as inventory control and order handling. Solutions involve acquiring the requisite technical knowledge, often at a cost that smaller enterprises cannot afford.
- Poor availability of international and local payment solutions. Merchants often lack online payment solutions. Restrictions may result from a variety of factors, including foreign exchange controls, policies of international payment providers and inadequate information about various merchants to permit effective due diligence with counterparts. Available solutions for small local businesses, for example, bank transfers or cheques, may encounter trust problems with international customers, or are costly to use.
- Lack of access to cost-effective logistics. Often, the international services provided by local postal monopolies are of poor quality, and express delivery may be costly. Without collaboration, the volumes of international transport needs of MSMEs remain low, leaving them in a weak position to negotiate better rates. These enterprises also face the administrative burden of understanding and managing export and import duties and regulations. Without proper handling of returned shipments, the advantages of international e-commerce can quickly disappear.
- Limited capability to manage requests and relationships with international customers.
- Low visibility, lack of an established reputation and poor trust in target markets. Potential customers need to know about the exporting firm and its products, and to have trust in the marketing channel. It is difficult to raise awareness of a firm’s products and services: promotional activities may be prohibitively costly and require a certain understanding of the end market. Building trust may require cultural awareness as well as technological solutions, such as access to verified standard security certification and, for business-to-business transactions, verified digital signatures.
- Lack of conformity with legal and fiscal requirements in target markets. Failure to account for value added tax and import duties can result in the consumer having to cover unanticipated extra costs on delivery. This may lead to costly returns of goods, a loss of reputation and the eventual barring of merchants from e-commerce sites. More fundamentally, correct export and import licences must be obtained and retained.

Source: UNCTAD, 2017a, based on International Trade Centre, 2017, E-commerce (available at http://www.intracen.org/itc/sectors/services/e-commerce/, accessed 6 February 2018).

A. Internet access

45. Affordable access to ICTs is essential for people and enterprises to engage in e-commerce and benefit from digital platforms. MSMEs in developing economies, especially in the least developed countries, need affordable access to appropriate ICT infrastructure to trade effectively in the digital economy. This includes mobile telephony, as a minimum, and increasingly, broadband connectivity, including in rural areas. In addition, there is a need to bolster the ability of MSMEs to make effective use of ICTs. Smaller firms generally lag far behind large ones in ICT use; this represents a barrier to their effective integration into global value chains, which are becoming increasingly reliant on digital solutions.[34]

46. Although connectivity has in some respects improved greatly in the past decade, developing countries, particularly the least developed countries, still lag behind in terms of fixed-broadband penetration, household access to ICTs and Internet use. According to recent data from the International Telecommunication Union, penetration rates of mobile cellular phones reached over 90 per cent in developing countries, but those of mobile broadband were only slightly higher than 40 per cent, and those of fixed broadband remained lower than 10 per cent.[35] More than half of the world's population remains offline – and the broadband divide is even wider. In the least developed countries, only 16 per cent of the population was using the Internet in 2016.

47. With regard to e-commerce, more than 70 per cent of people in several developed countries buy goods or services from the Internet. In most developing countries, however, less than 5 per cent engage in e-commerce.[36]

B. Payment solutions

48. Digital payment systems involve the use of debit and credit cards, online and mobile payments, and systems based on distributed ledger technologies, such as blockchain. In general, digital payments make transactions faster, reduce frictions and lower transaction costs, offering productivity gains and enabling firms to engage in trade. They free banks and merchants from the financial and non-financial costs of manual acceptance of payments, record keeping, counting, storage, security, delays, transparency of payment tracking, risk of non-payment at cash on delivery, recipient security and transportation of physical currency. Digital payments can help Governments address the challenges of black markets and tax avoidance, for example, and they also help support financial inclusion.

49. In 2014, credit and debit cards accounted for more than half of all e-commerce payments in value terms. However, their share is expected to drop to 46 per cent by 2019, as electronic wallets (e-wallets) and other alternative payment methods, such as mobile money, gain in importance. In developed regions, digital payments are dominated by credit and debit cards, followed by e-wallets. In developing countries, by contrast, credit cards are rarely the most important payment method for e-commerce, and the uptake of digital payments is often low.

50. For example, in Egypt, about 90 per cent of e-commerce transactions are paid by cash on delivery, and in the least developed countries, reliance on cash is even greater (see UNCTAD rapid eTrade readiness assessments of Bhutan, Cambodia, Nepal and Samoa).[37] In Kenya, the use of mobile money for e-commerce – accessing financial services by means of a mobile telephone – is more common than that of credit cards, although cash on delivery remains the main method.

[34] UNCTAD, 2017a.
[35] International Telecommunication Union, 2016.
[36] See UNCTAD, 2017a.
[37] See footnote 6.

51. For cross-border purchases, e-wallets appear to be a particularly popular payment method. A 2016 survey by the International Post Corporation of cross-border e-commerce shoppers across 26 countries found that e-wallets such as PayPal were the preferred choice for 41 per cent of the respondents, followed by credit cards (33 per cent) and debit cards or bank transfer (18 per cent).[38] A major obstacle to cross-border transactions is the lack of interoperability of payments systems.

52. In the future, distributed ledger technologies such as blockchain may increasingly be used for cross-border payments. They can make online payments safe, and since they are peer to peer, may be less expensive than intermediated payment platforms. While few Internet users currently prefer this method of payment, it is gradually being adopted, as it improves security, accelerates settlement, reduces the size of the minimum viable transaction and executes digitized versions of traditional contracts (so-called smart contracts). Its properties enable cross-border micro-transactions, including remittances, which would otherwise not be made because of high fixed costs or lack of trust among parties.

C. Logistics and delivery

53. The digital economy affects trade logistics that underpin globalized trade and international value chains in many ways. First, an increasing number of products are delivered digitally rather than physically. Second, the expansion of e-commerce in physical products has resulted in rapid growth in small parcel- and low-value shipments that are often shipped by small businesses and individuals, many of them ill-equipped to comply with complex trade rules, especially in view of the growth of shipments of small parcels and packages. It will be important to make use of digital data to improve trade logistics operations. For example, shipments should be consolidated where feasible – especially small parcels, which are sent directly from the producer to the final consumer – with more local warehousing near the consumer.

54. The need for compliance with customs requirements is another challenge for MSMEs. Compliance is particularly challenging for smaller e-commerce sellers that export to multiple markets, each with their own regulations. Indeed, customs regimes, trusted trader programmes and other programmes that help fast-track trade through customs tend to be tailored to the needs of relatively large traders that ship sizeable trade volumes on a regular basis. The criteria stipulated by such programmes are often difficult to meet, especially for small businesses.

55. Portals that support trade facilitation and logistics, such as single windows, port community systems, trade information portals, or customs websites that allow for direct trade input may also provide opportunities to support and benefit from e-commerce platforms. UNCTAD is actively supporting the development of customs automation, single windows and trade information portals.

D. Compliance with quality standards

56. For MSMEs in lower-income developing economies, participation in global value chains offers both opportunities and challenges. In particular, standards and quality requirements can be demanding. At the same time, they represent an incentive to engage in technical and managerial learning and innovation. Export performance of agricultural producers, for example, depends on their ability to meet quality requirements and standards. While digital tools can play a role here, there are few known examples of specific ICT-enabled interventions aimed at helping farmers upgrade their skills and processes with an export focus in particular.[39]

[38] For sources in this section, see UNCTAD, 2017a.
[39] UNCTAD, 2017a.

IV. Policy implications and guiding questions

A. How can be developing countries foster local platforms for domestic and cross-border e-commerce?

57. Local e-commerce platforms often play a complementing role to global ones in developing countries. Given the considerable network and scale effects involved in digital transactions, establishing a successful global e-commerce platform is difficult. This helps to explain why a few mega players tend to dominate the market. However, there is greater scope for tailored platforms to be successful if they target specific niches.

58. In general, fostering the development of local digital platforms should involve actions by government to raise the readiness of all stakeholders in the country to engage in and benefit from e-commerce. As long as only a small proportion of the population or enterprises are using e-commerce, the scope for new platform development remains limited. Government policies may wish to explore different ways of strengthening readiness in the seven policy areas identified by eTrade for all.[40] Special attention will also need to be paid to fostering entrepreneurship, innovation and access to financing of digital start-ups to strengthen the domestic productive capacity to develop tailored solutions for the digital economy. To the extent that a Government is open to involving foreign capital in the development of local platforms, it may be relevant to review the conditions for investing in such activities.

B. What are existing barriers related to international e-commerce platforms that developing countries, including the least developed countries, face and how can these barriers be overcome?

59. As highlighted above, merchants and developers in many developing countries lack full access to several global e-commerce or payment platforms. Although access is improving, unequal access to such platforms still represents an unlevel playing field for international trade online.

60. Further research is required to examine the reasons for a lack of access to certain platforms. It may be due to government policies of the host or home country or to corporate strategies of the platform owner. However, a common barrier to receiving payments through applications developer marketplaces and some e-commerce platforms is a lack of relevant payment solutions, such as mobile payments, credit cards or PayPal.

61. Policymakers may choose to engage with platform owners to ensure that they can be fully used, and that existing regulations do not hamper access. They may also support the provision of training for small and medium-sized enterprises on how to leverage different kinds of platforms. For example, some tourism platform providers have organized roadshows and training in East Africa, and strategic partnerships and provision of support to MSMEs have been undertaken with Alibaba for using its platform in Viet Nam. In China, partnerships aim to encourage small firms to join platforms as a core goal of firm modernization.[41]

C. What are some of the operational constraints that small and medium-sized businesses in developing countries face when setting up trade online, and how can they be overcome?

62. This note has discussed a number of operational constraints that small businesses often face when seeking to export through online channels. Given the cross-cutting nature of e-commerce, addressing the constraints requires a holistic approach that deals with multiple policy areas simultaneously.

[40] UNCTAD, 2017a.
[41] Ibid.

63. With regard to connectivity, it is necessary to accelerate the building and maintenance of a reliable and affordable high-coverage, high-speed digital infrastructure in developing countries. It is important to narrow the divides between and within countries with regard to access to and use of digital technologies. The solution may partly lie in more investment in infrastructure. Efforts should also be boosted on the demand side, to address problems such as low purchasing power, lack of awareness of Internet value, lack of trust, skill limitations and absence of local content. Special attention should also be given to addressing the gender digital divide. Moreover, policymakers should implement effective communications regulations and ensure access to reliable power.

64. Access to online cross-border payment services, supported by relevant laws and regulations, is also important. Private payment providers, such as PayPal and credit card companies, are less likely to invest in locations where regulations are weak or unclear. This, in turn, deters major e-commerce platforms from providing services to such locations. As the importance of online and mobile payments grows, more firms will require access to digital payment systems that can handle relatively small amounts at reasonable cost. Thus, online payments-related regulations adapted to smaller businesses are vital. With the proliferation of different payment solutions on the market, interoperability becomes increasingly important as well. Overcoming payments problems may require thinking out of the box. For example, Estonian e-Residency allows accessing a PayPal business account from any country.[42]

65. Policymakers need to deepen their understanding of the issues at the interface of trade logistics and e-commerce. They should explore and harness relevant opportunities to embrace cross-border e-commerce and create conditions, procedures and resources that would enable e-commerce to thrive, considering the best interests of MSMEs. New technologies and institutional reforms may help overcome some logistical bottlenecks.[43] Existing trade facilitation solutions become ever more important, including pre-arrival processing, customs automation, transparency issues, authorized economic operators and express shipments. Moreover, the logistical and transport infrastructure should be strengthened, and universal address and postcode systems established.[44]

66. The Agreement on Trade Facilitation of the World Trade Organization includes provisions that aim to modernize border clearance procedures and streamline processes. Such efforts become even more important in the evolving digital economy. Although a step in the right direction, the Agreement is not sufficient on its own; it does not address all issues arising from the proliferation of small parcels in trade, often shipped by small businesses. The new digital landscape calls for new and innovative solutions that support the consolidation of shipments and thus reduce the burden of control measures by border agencies. Many of the trade facilitation measures included in the Agreement are not only relevant for traditional business-to-business trade but even more important for small parcels and business-to-consumer transactions. National stakeholder coordination mechanisms, such as national trade facilitation committees, will increasingly need to include e-commerce issues in their work programme.[45]

67. Cross-border e-commerce involves locating foreign customers online, marketing to them through social media and e-commerce platforms, branding, labelling and pricing products geared to particular income levels and tastes of foreign customers, building online advertisement strategies and partnering with e-commerce platforms. While sellers on e-commerce platforms may start to export following their discovery by a foreign buyer, their international growth requires a more systematic and strategic approach.

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[42] See https://medium.com/e-residency-blog/how-to-access-a-paypal-business-account-from-any-country-f5360419fed8 (accessed 6 February 2018).

[43] UNCTAD, 2016c, *Trade Facilitation and Development: Driving Trade Competitiveness, Border Agency Effectiveness and Strengthened Governance* (United Nations publication, Geneva).

[44] UNCTAD, 2015.

[45] UNCTAD, 2017c, *National Trade Facilitation Committees: Beyond Compliance with the WTO [World Trade Organization] Trade Facilitation Agreement?* Transport and Trade Facilitation, Series No. 8 (United Nations publication).

68. Countries could explore ways to integrate digital solutions in export promotion. Trade promotion organizations should embed digital tools in their services to small businesses; they should leverage online platforms to present businesses internationally and reach desired communities. With the growing importance of online marketing channels, there should be more use of e-market solutions and social media platforms in trade shows and in capacity-building. Public–private partnerships can be useful in this context.

69. Another issue highlighted above concerns compliance with quality standards. While some support mechanisms exist in developing countries, such as fair trade and environmental standards bodies, many are privately run and not always financially accessible to small producers. Initiatives such as the Trade for Sustainable Development Forum of the International Trade Centre and pilot projects on horticulture exports to the European Union may present opportunities to gain further understanding of best practices in this area.[46]

D. What are good practices that developed and developing countries, including the least developed countries, can learn from each other?

70. While this note has provided examples and illustrations on the different topics addressed, the discussion on good practices for countries to learn from each other should be enriched by the sharing of experiences by the experts from different member States participating in the second session of the Intergovernmental Group of Experts on E-commerce and the Digital Economy. Written contributions by member States may also provide a background for the discussions at the meeting.

71. In addition to discussions by the Group, member States should also consider engaging in discussions at the regional level. Neighbouring countries may face similar opportunities and challenges and may therefore benefit significantly from sharing their experiences.

[46] UNCTAD, 2017a.