Unlocking the Potential of E-commerce

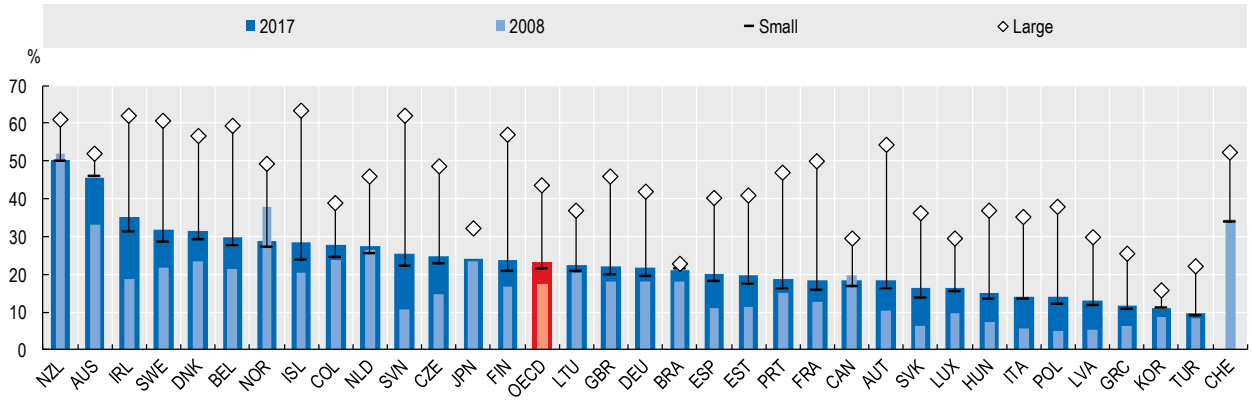
As digital transformation has accelerated, the e-commerce landscape has become increasingly dynamic. New players have emerged at the same time that established actors have taken on new roles; some barriers to e-commerce at the firm, individual and country levels have been overcome, while new barriers have emerged. New business models have transformed buyer-seller relationships and pushed out the frontier of what is possible to buy and sell online. Above all, new opportunities have arisen to unlock the potential of e-commerce to boost growth and well-being.

E-commerce is increasing in size and scale, but gaps remain

More firms are buying and selling online than ever before, including across borders. The absolute value of the e-commerce market is growing and an increasing share of firms is selling online, including small and medium-sized enterprises (SMEs). This is true across industries, including in traditionally consumer-facing sectors. Overall, business-to-business (B2B) e-commerce dominates in absolute terms, but there has been a relatively larger increase in business-to-consumer (B2C) e-commerce transactions in sectors like retail and accommodation. In 2017, more than one in five firms in OECD countries participated in e-commerce transactions, with the share reaching 40% in some countries (Figure 1). However, large firms are more than twice as likely as SMEs to participate in e-commerce in a majority of countries, and this gap is widening on average.

Figure 1. There is a significant and persistent gap between the participation of large and small firms in e-commerce

The percentage of firms receiving orders over computer networks, by size, 2017



Note: See endnote 1.

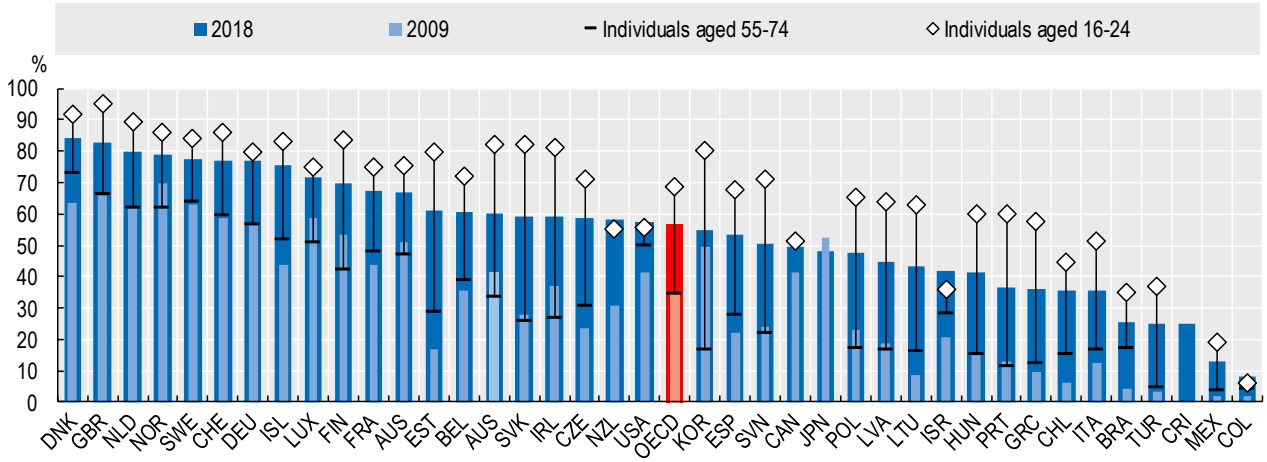
Source: OECD, *ICT Access and Usage by Businesses* (database), http://oe.cd/bus (accessed February 2019).

Although the share of firms selling online is increasing, many firms still face challenges to further engaging in e-commerce. Survey responses from both e-commerce and non-e-commerce firms suggest that firms believe that some products are unsuitable to be bought or sold online. In addition, a large proportion of firms – particularly those that engage in cross-border e-commerce – struggle with high costs for delivery and returns, or face problems with logistics. Cross-border disputes, differences in regulation, and limited language skills pose additional challenges for e-commerce firms. These factors help explain why less than half of all e-commerce firms in the EU28 sell products to other EU countries.

On the other hand, there has been a surge in e-commerce participation among individuals. E-commerce can help lower prices and expand the variety of products available. E-commerce is also convenient, enabling people to shop online from any location and at any time of day. The most recently available surveys suggest that more than half of all individuals in OECD countries have made online purchases over the last 12 months (Figure 2).

Figure 2. More people are buying online than ever before

Percentage of individuals who have purchased online over the last 12 months, 2018



Note: See endnote 2.

Source: OECD, *ICT Access and Usage by Households and Individuals* (database), http://oe.cd/hhind (accessed February 2019).

However, not all consumers are equally likely to participate in e-commerce. Significant gender gaps persist in several OECD countries. Participation rates are also markedly lower for older individuals, people with lower levels of education, as well as low-income households and those in rural areas. While most of these gaps have been decreasing over time, the gap between the e-commerce participation rate of low-income households and high-income households increased between 2009 and 2017. This is particularly worrisome because the increasing availability of smartphones and decreasing prices for Internet access should have lowered barriers to entry for low-income households. Additionally, the larger variety of products sold online today should have made e-commerce more appealing to low income households.

One of the most cited reasons for the lack of consumer participation in e-commerce is that consumers often prefer to shop in brick-and-mortar stores. Other challenges related to trust and payment security appear to have diminished over time, but remain important barriers for particular groups, such as the elderly. This group may also feel constrained by a lack of necessary skills, a challenge that has become more significant over time and is likely to affect individuals with low levels of education. Access to payment mechanisms represents another important challenge for many people engaging in e-commerce, and is likely to affect some groups, particularly low-income households, disproportionately.

Targeted policies can help bridge e-commerce divides

SMEs still lag behind larger firms in terms of e-commerce participation. In many cases, this is related to high costs of delivery and returns, a problem that SMEs face significantly more often than other firms. Updating regulations to relieve bottlenecks in areas such as postal services or custom clearance may help in this respect. SMEs also struggle more with regulatory uncertainty, as they often lack the financial means to obtain the required legal expertise. This carries over to the relationships between SMEs and larger service providers, such as online platforms. In particular, the European Commission recently proposed new rules on transparency and fairness to foster a predictable and trusted business environment for both SMEs and online platforms and to reduce information asymmetries. SMEs could also benefit from multistakeholder initiatives such as the Electronic World Trade Platform, which aims to foster a more effective policy environment for online trading.

With respect to individuals, significant gaps remain with regard to education, income and age, but also gender and for households in rural areas. Factors that inhibit participation of these groups are often related to economic and social conditions that reach far beyond e-commerce, including rural-urban divides, income distribution, unequal access to education or an aging society. With regard to e-commerce, these conditions may manifest themselves in low connectivity, a lack of digital skills, low levels of trust or a lack of viable payment options – factors that can be addressed by policy action. Relevant measures in this regard include targeted information campaigns, trust building initiatives, adult training, as well as public private partnerships that target the participation of low-income households and households in rural areas.

E-commerce business models are evolving

Many firms are innovating in the ways that they sell products online. Firms can make use of a range of digital technologies, including artificial intelligence, blockchain, the Internet of Things and autonomous delivery devices like drones or robots to facilitate e-commerce. Three e-commerce business models have been particularly transformative: those that use online platforms, subscription services, and online-offline models.

Online platforms have transformed the e-commerce landscape by matching sellers and buyers, including across borders, to facilitate online transactions. Platforms bring together many actors enabling a much wider scale and scope of goods and services that can be profitably sold online but might have been impossible to sell offline or through an individual website. As e-commerce platforms bring together many unknown actors and products, reputation mechanisms to enable trusted transactions become more important, as do matching mechanisms that connect buyers with sellers, or individuals with content. As it is often in the best interests of e-commerce platforms to help firms to sell via their marketplace, mechanisms to facilitate firm engagement have increased, including fulfilment, customer service and export assistance.

Many e-commerce markets also feature subscription business models, which enable the continuous provision of goods or services in exchange for recurring payments. From music-streaming business models to subscription access to bundled digital and physical products, these business models are becoming increasingly prevalent in the B2C space. Consumers may find such models convenient, especially for the recurring purchase of goods that require replenishment, including many common household goods. Similarly, firms can benefit from lower marginal costs, reduced frictions and long-term recurring revenue flows.

Some firms sell online using offline services or facilities. Others add online functions to traditional offline business models. Such models may allow customers to order online but pick up offline, including in-store, kerbside or other pick-up locations. This appears particularly prevalent for goods, like groceries, where consumers may wish to assess the quality of the product. Some online-offline business models help consumers to assess the fit of a particular product (e.g. clothing) before making an online purchase. Another business model that blends online and offline components includes the online ordering of products in or near brick-and-mortar shops. From automated supermarkets to skip-the-queue mobile application ordering, more firms are experimenting with mechanisms that enable e-commerce while removing the frictions associated with offline ordering.

Public policies should enable innovative e-commerce business models

As digital transformation progresses, new business models will arise in ways that are difficult to predict. Business model innovations that make use of data and digital technologies often challenge traditional policy frameworks, particularly for firms that use new business models to innovate across and between sectors, offer new forms of payment services or exploit technologies in new and innovative ways.

Remove regulatory barriers that preserve artificial distinctions between online and offline commerce

Technological changes have blurred the boundaries between online and offline activities, as well as between goods and services. This has an impact on policy frameworks that rely on the increasingly artificial distinction between traditional commerce and e-commerce. Because firms are increasingly combining the most promising aspects of both worlds, the level of ambiguity will grow. For example, existing licensing, permitting or zoning roles may not allow firms to perform functions beyond the simple point-of-service purchase of products, which could constrain the emergence of new omni-channel business models. Similarly, existing road and sidewalk rules may not enable firms to experiment with logistics and fulfilment solutions to facilitate the physical delivery of products over the so-called “last mile”, including using autonomous robots and unmanned aerial vehicles. Many such rules are local, which further underscores the need for a consistent and co-ordinated whole-of-government approach to e-commerce policymaking at all levels of government.

Encourage regulatory flexibility, experimentation and transparency

Regulatory uncertainty can reduce the incentive to invest, and it may constrain the ability to scale as investors may be unwilling to invest in a firm with an untested product, service or business model. In the e-commerce context, mechanisms to promote regulatory flexibility have been used to enable firms to test digital payment mechanisms and the use of drones for delivery. As e-commerce business models evolve, more flexibility may be needed to realise the potential of new technologies, like blockchain or 3D printing. Increased transparency, including through better communication of existing regulations and their specific application to e-commerce, is another important step in reducing uncertainty for innovative firms.

At the same time, policies that focus on a particular type of e-commerce business model should be avoided. Given the dynamism of the e-commerce landscape, some e-commerce business models that are dominant today may not be dominant in the future. For example, while e-commerce business models that use online platforms are among the most prominent in the current e-commerce landscape, advances in decentralised structures like distributed ledger technologies might diminish this role in the future. An alternative approach is to ensure that particular business functions conform with regulatory frameworks, while better accounting for the interlinkages across business functions.

Policies should be co-ordinated to unlock the potential of e-commerce for all

Technological change and business model innovations are altering the e-commerce landscape, and these new developments affect policy frameworks along several dimensions. Some of the challenges identified in the early days of e-commerce remain relevant (e.g. related to personal data protection), but new challenges have also emerged (e.g. the rise of digitally tradeable services and their implications for trade policy and domestic regulations). These developments require a holistic approach to e-commerce policymaking, including co-operation and collaboration across policy areas like consumer protection, tax policy, competition policy, trade policy and environmental protection. Relevant issues related to privacy, for example, cut across several of these policy areas. Policy action in these and other areas should not be unilateral, but instead developed with thoughtful consideration of the impacts across policy areas. A periodic review of policy settings may be useful in ensuring that the benefits of e-commerce can be maximised while addressing the related challenges.

Notes

1. Data for 2017 stems from the 2018 survey. Data for 2008 stems from the 2009 survey. Small firms are defined as firms employing 10 to 49 employees, while large firms are those employing more than 250 employees. Data for Australia is from 2016 instead of 2018. Data for Canada is from 2013 instead of 2009. Data for Colombia is from 2016 and 2009. Data from Iceland is from 2010 instead of 2009. Data for Japan is from 2016 instead of 2018, and no data is available for small firms. Data for Korea is from 2016, instead of 2018. Data for New Zealand is from 2016 2010. Data for Switzerland is for 2011, instead of 2009, and no data is available for 2018. Data for Turkey is from 2010 instead of 2009. Data for Brazil is from 2017, instead of 2018.
2. Data for Australia is from 2016 and 2008. Data for Canada is from 2012, instead of 2018, and a breakdown for those aged 55-74 was unavailable. Data for Chile is from 2017, instead of 2018. Data for Colombia is from 2017, instead of 2018. Data for Israel is for 2016, instead of 2018. Data for Japan is from 2016, instead of 2018, and a breakdown by age was unavailable. Data for Korea is from 2016, instead of 2018. Data for Mexico is from 2017, instead of 2018. Data for New Zealand is from 2012 and 2006. Data for Switzerland is from 2017 and 2010. Data for the United States is from 2017 and 2013. Data from Brazil is from 2016, instead of 2018. Data from Costa Rica is from 2017, instead of 2018.

Further reading

OECD (forthcoming), *A Dynamic E-Commerce Landscape: Developments, Trends and Business Models*, OECD Publishing, Paris.

Please cite this note as:

OECD (2019), "Unlocking the potential of e-commerce", *OECD Going Digital Policy Note*, OECD, Paris, www.oecd.org/going-digital/unlocking-the-potential-of-e-commerce.pdf.