

Why are indicators on e-commerce needed?

E-commerce has been high on the agenda for policy makers since the mid-1990s. In 1998, the OECD Ministerial Conference on Electronic Commerce in Ottawa recognised e-commerce as a global driver of growth and economic development (OECD, 1998). In 2016, the OECD Ministerial Declaration on the Digital Economy called for policies to “stimulate and help reduce impediments to e-commerce within and across borders for the benefits of consumers and business” (OECD, 2016).

The e-commerce landscape has become increasingly dynamic in recent years. New players have emerged and established actors have taken on new roles. Some barriers to e-commerce, such as Internet access have been greatly reduced, while new barriers, such as concerns about security and privacy, have become more prominent. Above all, new opportunities have arisen to unlock the potential of e-commerce to boost growth and consumers’ welfare. (OECD, 2019a). As technological change and new business models alter the e-commerce landscape, policy faces challenges in a range of areas, including consumer protection, tax, competition, and environmental policy. Sound statistics on e-commerce are necessary to design, monitor and implement these policies. However, statistical information on consumer and operator behaviour and on the effects of online platforms is still scarce.

What are the challenges?

The OECD first developed a statistical definition of e-commerce in 2001. Based on this, OECD and partner countries collect data on e-sales and e-purchases by individuals and businesses, through two dedicated surveys on ICT usage. The definition of e-commerce and its implementation in surveys are regularly adjusted for new technological developments and usages. This definition is also a central component of the OECD digital supply-use table and digital trade measurement frameworks (see pages 2.11 and 9.6).

Nevertheless, measurement of e-commerce through the ICT usage surveys presents methodological challenges. These include the adoption of different practices for data collection and estimations, the treatment of outliers, the extent of e-commerce carried out by multinationals, and the imputation of values from ranges recorded in surveys. Sectoral coverage of surveys and limited information on the actors involved are also issues. Convergence of technologies brings additional challenges for the treatment (and surveying) of emerging transactions, notably over mobile phones, via SMS or using devices that enable near field communication (NFC).

While ICT use surveys have been successful in measuring the diffusion of e-commerce among individuals and firms, collecting information on the value of e-commerce transactions and on the flows of cross-border e-commerce has proven more difficult. Individuals find it hard to recollect online expenditure values and do not always know whether they are purchasing from a domestic or a foreign supplier. Furthermore, the accounting systems of many businesses do not differentiate online and offline transactions or identify the location of customers and suppliers. In addition, because business-to-consumer transactions increasingly include digital products downloaded or streamed over the Internet, it is difficult for survey respondents to identify the country of origin.

Beyond survey data, several other sources have been used to approximate e-commerce transactions, including cross-border flows. These include the aggregation of data from company reports, payment data, parcel shipments or Internet traffic, among others (UNCTAD, 2016). However, each of these only provides a partial and potentially biased perspective on e-commerce. Approaches aggregating company reports are often restricted to small sub-populations of firms (e.g. large firms, online-only retailers). Payment data are typically limited to a specific method of payment and might contain certain transactions that are not related to e-commerce (e.g. payments via NFC). Additionally, the geography of cross-border payments does not always reflect the geography of cross-border e-commerce, as payment processing can be outsourced to a third country. Parcel shipments only relate to physical products and mostly do not provide detailed information on the value of shipments. More importantly, not all parcel shipments are the result of e-commerce transactions. The geographic origins of Internet traffic to retailers’ websites, sometimes used as a proxy for cross-border transactions, does not account for the value of resulting shipments.

Options for international action

There are three main axes to International initiatives to improve the measurement of e-commerce. The first is to improve the quality of the data collected through ICT use surveys. For example, a consortium of seven European countries led by Finland (Eurostat, 2017) tested a set of new questions to capture developments in e-commerce, including demand-driven orders, bookings and reservations, window shopping, standing orders, marketplaces and within-group transactions. The findings of this work are being reflected in the European ICT usage surveys and could be considered for inclusion by other countries.

The second axis is the inclusion of e-commerce questions in other surveys that may be better suited to measuring e-commerce volumes. In general, measuring the value of e-commerce requires detailed information that cannot be collected through ICT surveys. Instead, the framework of the Structural Business Surveys appears more appropriate

