BRIEFING

The rise of e-commerce and the cashless society

SUMMARY

Sales in the EU still predominantly take place offline – in bricks and mortar shops – and purchases are still predominantly made with cash. However, thanks to the level of convenience they offer, both online shopping and cashless electronic payments are booming and are among the key drivers of the digital transformation taking place in our economy and society. The real-time accessibility of e-commerce products and their availability 24 hours a day, together with the ease of making electronic payments, are disrupting many aspects of traditional consumer shopping behaviour, which is also increasingly driven by widespread use of mobile devices and apps.

Online sales hit a record high in 2019. At the international level, China is leading in both e-commerce transactions and mobile cashless payments. However, the coronavirus (COVID-19) crisis has put countries across the world, starting with China, into extraordinary conditions, with citizens staying at home; and some sellers trying to extract the highest profit possible from the situation.

In the EU, a large majority of internet users, particularly those under the age of 45, shop online. Clothes, sports goods, travel and online content such as games, videos and music are among the most popular items.

This trend is also driven by the increase in cashless payments, which have become very popular in some countries. The numerous different cashless payment methods in existence are often highly localised. One such example, the e-wallet, is gaining particular importance, driven by the over 2 billion users it enjoyed in 2019.

On the other hand, e-commerce and the cashless society are facing a host of challenges related to cybercrime, fraud, privacy, the digital divide and pollution, among others. The coronavirus outbreak is also posing various challenges to e-commerce supply chains, many of which are based in the hardest-hit countries. However, the opportunities that e-commerce and cashless transactions afford in terms of convenience, efficiency and affordability will help them gain further ground in the years to come; their popularity among younger generations and strong EU-level policy support for digital transformation are also helping boost their prospects.

In this Briefing

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The growth in e-commerce

There are different types of e-commerce purchases, including business to consumer (B2C), business to business (B2B) and business to administrations (B2A). This briefing focuses on B2C e-commerce transactions only. Online B2C e-commerce purchases have witnessed a steady growth in popularity worldwide over time. In 2015, just about 7 % of all retail sales were made online; in 2019, this figure had doubled to over 14 %. At present, the online share of total retail sales is estimated at 16.4 %, with e-commerce accounting for more than 75 % of overall global retail growth. Some researchers predict that this trend will continue, and the online share of total retail sales will reach 22 % by 2022. Similarly, the number of online shoppers worldwide is also expected to continue growing: from 1.66 billion in 2016 to 2.1 billion in 2021. China has already exceeded this rate of increase, as its online retail sales accounted for over 35 % of total retail sales in 2019, by far the greatest in the world, up from 19 % in 2016. In fact, China alone represents over half of all online retail sales globally, surpassing the US, UK, Japanese, German and French e-commerce markets combined.

Most consumers buy goods through online marketplaces. These have become extremely popular due to the large number of products available at affordable prices. According to market research, online marketplaces currently account for 56 % of online sales and will attain 67 % of global e-commerce sales by 2022. The main e-commerce marketplace players are Chinese (Taobao, Alibaba, JD.com) or American (Amazon, eBay). Amazon is believed to be the driving force behind the 39 % share of all e-commerce sales in the US; furthermore, it has surpassed Walmart as the world's largest retailer.

Some EU players, such as Allegro (Poland), bol.com (the Netherlands), Coolshop (Denmark), eMag (Romania, Hungary, and Bulgaria), and Otto Group with Zalando (Germany), are also gaining in importance at local or international level.

Different factors contribute to the rise of B2C e-commerce. First of all, there is a growing number of active online users, particularly young ones, who are increasingly shopping from different devices and on the move. The interfaces and online shopping procedures involving online payment methods are increasingly easy and user friendly, as are retailers' dedicated online shopping apps. The delivery timeframes and the return policies add to the convenience.

The desktop PC is still the most popular device for online purchasing; however, by 2021 mobile e-commerce sales are expected to account for 54 % of total e-commerce sales. As the internet is increasingly accessed from a mobile device, such as a tablet or smartphone, users increasingly purchase on the move, from either websites or apps. According to industry estimates, mobile payments will have passed the 50 % milestone by 2026, becoming mainstream in most markets.

According to market research, a third of all online purchases in the US during the 2019 Christmas shopping period were made by smartphone users, and nearly 40 % of sales during the Black Friday promotions in November 2019 were made via a mobile device.

In the EU, 84 % of the population are regular internet users, and about 73 % access the internet on the move from their mobile devices, for a variety of purposes including online shopping.

Profiles of EU online shoppers

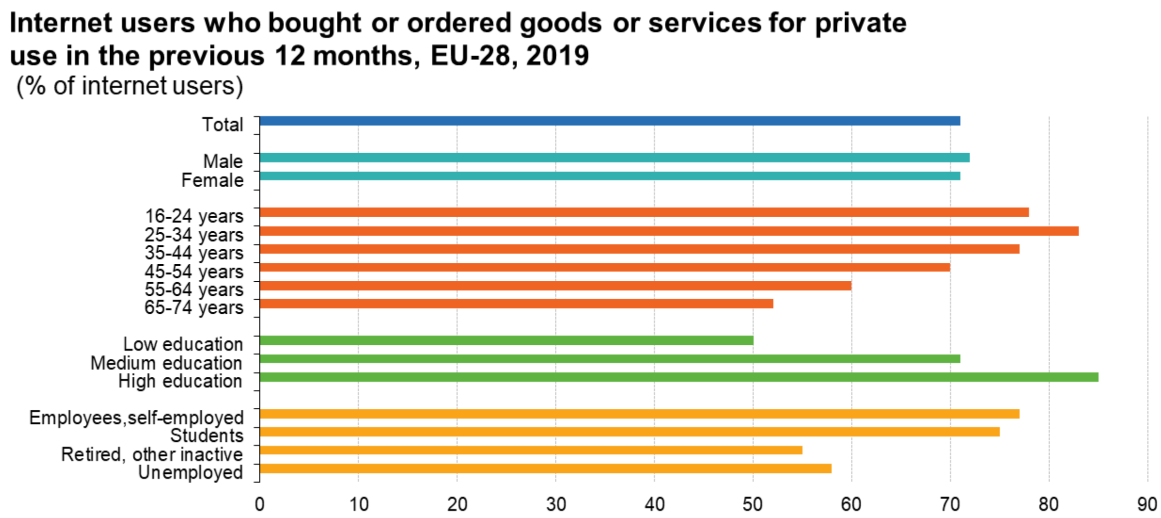
According to Eurostat, more than half of the EU population (60 %) ordered a good or a service online in 2019, up almost double from 2009 (32%). This percentage is even higher among younger groups.

Figure 1: Evolution of online shoppers in the EU over a decade

Source: Eurostat (isoc_ec_ibuy).

When it comes to online purchases, there is still a clear digital divide in the EU: according to Eurostat, EU online shoppers are people who are most likely to be under 65, well educated and be in employment or studying. On the other hand, groups with less purchasing power, such as the retired and unemployed, shop less online. The same applies for people with low education levels, who might lack the skills or facilities, and confidence, to shop and especially pay online.

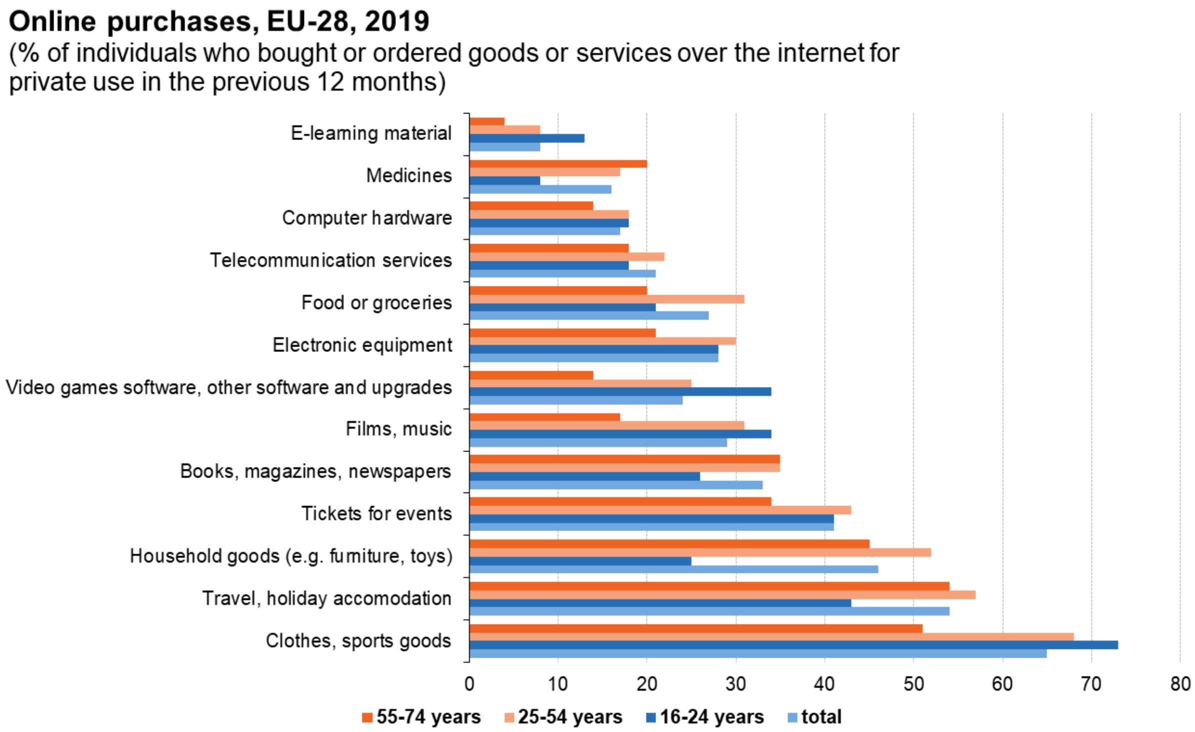
Figure 2: EU online shoppers according to different age groups, education levels and economic activity



Source: Eurostat (isoc_ec_ibuy).

When it comes to types of products and services purchased online, clothes, sports goods and travel and accommodation are the most popular among all age groups. Online content, such as music, movies and series, is also widely popular across all age groups. People prefer to buy such items online, as they also consume them electronically. While buying household goods online is more popular among older age groups, younger age groups have a stronger presence when it comes to shopping online for tickets for events, games and software.

Figure 3: Most popular types of items purchased online



Source: Eurostat (isoc_ec_ibuy).

It is important to highlight that in 2019, 35 % of online shoppers, or nearly three times more compared to 2011, bought or ordered goods or services from sellers in EU countries other than their country of residence. Therefore, it is possible to conclude that the EU digital single market is increasingly becoming a reality. Yet, one in four SMEs reported facing barriers to cross-border e-commerce in 2019, among them high costs of returns.

The COVID-19 coronavirus crisis

As the COVID-19 coronavirus outbreak evolves into a pandemic, many people have been voluntarily staying at home to telework or have been asked to do so because of quarantine. Subsequently governments have adopted ever stricter restrictions to limit social contact to slow the spread of the virus. Such restrictions are resulting in e-commerce spreading even further to product categories such as groceries. For instance, in China, one of the countries most affected by the virus, fresh food-related sales on JD.com jumped 215 % during a 10-day period in February 2020. Generally, online and offline grocery stores are witnessing 'panic buying' and bulk shopping for categories like fresh food, household chemicals, personal hygiene and health. Some of these categories have seen 90 % growth rates since the heath crisis started. Efforts to eliminate human to human contact and the touching of cash have also triggered a rise in contactless payments; in South Korea, for instance, card and mobile payments grew 30 % between January and February 2020, as did innovation in contactless pickup and delivery services. As people stay at home more, they also download more online content and games for entertainment. On the other hand, the growing crisis has meant people are not reserving travel, hotels or tickets for events online, hitherto one of the biggest areas for online purchasing.

Some sellers have tried to profit from panicked shoppers, among other things by selling face masks and hand sanitiser at up to 2 000 % of their normal retail price on Amazon. Amazon has responded by removing 1 million items from its platform for violating its policies on these fronts. Italy, the most affected EU country to date, is also investigating cases of crisis-related profiteering. In France, over 8 000 persons have signalled such fraudulent practices to the authorities on a dedicated investigative platform. Similarly, major e-commerce and marketplace companies in the US including Amazon, Walmart, eBay and Etsy have taken action against sellers who inflate their products' prices, as well as against those claiming their products provide a cure for COVID-19.

E-commerce supply chains are also impacted by the pandemic, as a large part of manufacturing is based in China and other affected countries, and some factories have been forced to suspend or lower production. Freight and international transport have also been disrupted, given the lockdown of some regions and countries and big changes in demand patterns. Amazon's 'prime now' and 'fresh deliveries' have both been put to the test due to the demand surge that is straining the platform's delivery capacity. Both UPS and FedEx expect shipment disruption worldwide and delays in countries most affected by the COVID-19 outbreak. This, together with the ongoing US-China trade war, may lead retailers and manufacturers expand their footprint outside China.

The emergence of the cashless society

The payment methods market is going through a phase of major change driven by new digital technology. The e-commerce trends open the door for new digital payment solutions and new players on the payment market,[1] contributing to the emergence of the cashless society in some countries. Yet, in Europe about 80 % of point-of-sale (POS) transactions (a POS is the place where customers pay for goods and where sales taxes may become payable) are still made in cash. However, some highly digitised countries have moved steadily away from cash. In one of them– Sweden – cash transactions accounted for less than 2 % of the value of payments in 2018. Moreover, digital payments via card or apps are now so widely accepted that many consumers no longer carry cash and many retailers no longer accept it. The response to this trend has been ambivalent: some groups of older people have complained of exclusion, while children have increasingly been using preloaded cards for pocket money rather than cash.

With the increase in popularity of digital wallets (also called mobile wallets or e-wallets), the range of payment choices available is increasingly broad. E-wallets can be used together with mobile payment systems, allowing customers to pay for purchases with their smartphones. An e-wallet typically stores payment information on a mobile device, usually in an app. Mobile wallets can utilise different technologies in the payment process, most frequently near-field communication (NFC) payments (such as Google Pay, Apple Pay and Samsung Pay). Other methods, such as Quick Response payments (QR codes), have been used very widely in countries such as China (such as WeChat, AliPay). There, e-wallets have already surpassed cash and cards both in store transaction volumes and values. Both WeChat and AliPay currently have more than 1 billion users each.

Thus, it has become easier for most people to pay by card or mobile phone, given that these cashless options are now available almost everywhere. Younger generations in particular are reshaping the digital landscape and are more prone to shop and pay through their mobile phones.

According to a 2019 industry report, online payment methods in Europe vary according to local preferences: in the UK, for instance, credit and debit cards are the two most popular payment options, with PayPal coming third. Germans like to pay with PayPal and with open invoices,[2] while the French like to use the Carte bleu debit card. In the Benelux, iDeal (the Netherlands) and Bancontact (Belgium) are very popular.

In this context, it is important to note that there is no pan-EU retail payment method to date (other than cash in euros), as there is no European card scheme. This is a source of concern for the European Central Bank (ECB), given the potential risks of Europe's reliance on new global initiatives that are faster and cheaper than cash, as cash use declines. These risks are related to the untested nature of some initiatives, as well as to possible negative effects on the autonomy and resilience of European payment systems. Thus, the ECB is calling for a European payment strategy to change this situation.

Positive and negative aspects

Both e-commerce and cashless payments can bring many advantages to the EU economy and society. E-commerce has been shown to be a driver in the creation of jobs, particularly in developing countries. One of the benefits of e-commerce is that hiring employees is more affordable, as among other things it makes it possible to outsource work to countries where wages are lower. However, some have questioned the quality and sustainability of such jobs, as in the case of those created by the sharing economy in the tourism sector.

Furthermore, cashless payments enhance online commerce and fraud reduction. Undeclared payments in cash lead to tax gaps, and there are costs associated with handling, printing, transporting and safeguarding cash. One study estimates that increasing digital payments will bring many economic gains. Small businesses in particular may benefit, with mobile payments enabling them to rent, buy and get paid more easily.

From a cohesion and inclusion perspective, e-commerce can also help to bring a broader range of products and services to remote and rural areas. This wider range of choices facilitates product price and information comparisons, empowering consumers to potentially buy more affordable products and contributing to more appropriate decision-making with regard to purchasing.

As regards payment methods, mobile payments represent a good opportunity to reduce financial exclusion, as users are not obliged to hold a bank account. About 2.5 billion people globally do not have a bank account, which explains why some excluded groups prefer cash.

Another advantage of e-commerce is that online stores are open for business 24 hours a day. Thus, e-commerce can also help consumers save time and dedicate it to other activities. One of the reasons why Amazon is so popular is because of the improved customer experience in terms of short delivery times and the option of returns. Its 'Prime' members even get their items shipped within a day, avoiding a long wait for much-needed products or visiting a shop. These advantages are highly appreciated by consumers and are setting the industry standards, prompting other retailers to speed up their delivery timeframes too.

Moreover, the current severe health crisis has highlighted other positive aspects of using e-commerce and cashless payments, for instance, the possibility for quarantined people to order food and other essential items. Furthermore, thanks to digital technologies, they can telework and be informed/entertained or remotely attend university or school classes.

Concerns have been voiced over the prospect of shops in cities having to close, given that new generations increasingly buy online. In the US, it is estimated that over 9 000 shops closed in 2019, a 59 % jump from 2018 and the highest number to date. Moreover, as online sales are expected to rise in the years to come, it is expected that this could result in about 750 000 more US shops closing down by 2026. However, others argue that e-commerce is a driver of offline purchases, as it influences up to 56 % of in-store purchases, the 'webrooming' phenomenon. The opposite – 'showrooming' – also exists: consumers look at goods in physical shops and then buy them online.

Many argue that e-commerce players, particularly platforms, gain an increasingly competitive advantage compared to conventional shops through the online consumer data gathered. Particularly when it comes to big players, their data optimisation might be difficult to compete with. They are thus able to acquire a competitive advantage by means of a mechanism known as the 'feedback loop', which means improving the quality and value of a firm's products and services either by using data already at its disposal or by using revenue generated from business users, such as from targeted online advertising. Thus, online profiling is gaining in importance, as retailers can better study customer behaviour online. Moreover, tools such as facial recognition are gaining in importance in countries such as China, where online users are being closely monitored and not only for commercial purposes. In the EU, this is happening to a lesser extent than in other countries, thanks to the 2016 General Data Protection Regulation (GDPR).

A negative impact of the rise of e-commerce is the pollution it creates, due to the increased reliance on transport services for making faster deliveries and the increased number of packages ordered. It is no surprise then that freight is the fastest-growing source of greenhouse gases and a major source of local air pollution; it also generates a big volume of related waste, for instance, as a result of packaging small items in big boxes or excessive packaging to keep items secure.

To fight this trend, some e-commerce players are planning to employ artificial intelligence (AI) to improve materials, packaging and logistics, and to optimise deliveries by road, rail and air.

China's Smart Freight Centre, for instance, is exploring different solutions for efficient and green urban freight, such as an urban distribution logistics policy framework. It is estimated that delivery packaging accounts for 93 % of solid waste growth in China's big cities.

Amazon is planning to put 100 000 electric cargo vans and trucks in place to help reach the climate change targets agreed in Paris by 2040.

Another negative impact of e-commerce and cashless payments comes with the increased risks of cybercrime attacks and cybersecurity breaches they pose. Over 87 % of EU citizens consider cybercrime an important challenge: with payments becoming increasingly cashless, online theft – of money, and also personal data – has been on the rise. In this context, AI is once again seen as capable of providing a solution, as it has the potential to make better and faster decisions to tackle hacker and criminal attacks.

Finally, product safety issues are also still to be tackled by e-commerce platforms. A recent research done by six European consumer associations has shown that 75 % of products bought from the online marketplaces AliExpress, Wish, Light InThe Box, eBay and Amazon have failed safety tests.

What the EU is doing

For many years now, the EU has been supporting the development of the digital single market, including e-commerce, digital payments and more broadly the digital transformation to achieve a Europe fit for the digital age (the latter is among the key priorities of the new European Commission). The EU has adopted new e-commerce legislation, for instance, to facilitate cross-border e-commerce deliveries, avoid geo-blocking and improve the availability of online content across the EU. It has also passed legislation to improve consumer protection and personal data protection (GDPR), and drafted safety guidelines for products sold online and for improving cybersecurity. It is also supporting investment in artificial intelligence, e-skills and the digitalisation of industry under the proposed Europe Digital Programme (2021-2027), among others. From an enforcement perspective, the EU has advanced in the fight against cybercrime, with stronger rules against online payment fraud and better assistance to victims. The EU also helps to reinforce the capacity of Member States' law enforcement authorities to tackle cybercrime; for instance, the European Cybercrime Centre at Europol supports Member States by providing tools, expertise, and coordination of police action.

Regarding electronic payment methods, the recently adopted Payment Services Directive 2 (PSD2) aims to make online payments more secure for both EU customers and businesses. It does so by introducing strict security requirements for electronic payments and the protection of consumers' financial data, guaranteeing safe authentication and reducing the risk of fraud.

Within the Commission's 2020 work programme, the revision of the E-Commerce Directive is envisaged in a future digital services act, which will strengthen the EU's legal regime with regard to the accountability of platforms and will also tackle aspects of product liability.

Regarding skills, the EU will put forward a digital skills education plan, and as part of the new industrial strategy published on 10 March 2020, it will support SMEs in gaining the skills required for their digital transformation, while also supporting the decarbonisation of the EU's economy to help the EU become climate-neutral by 2050, and supporting the Green Deal.

As technological competition with other regions and in particular with the US and China intensifies, including as regards e-commerce and cashless payments, the task of achieving digital sovereignty is gaining increasing importance at EU level, as reflected in the Commission's new digital strategy and the ECB's European payment strategy.

MAIN REFERENCES

Unpacking e-commerce, OECD, 6 June 2019.

The Future of E-commerce: The Road to 2026, OVUM, 2017.

Cross-Border Payments and Commerce Report 2019-2020: The rise of marketplaces, The Payers, 2019.

ENDNOTES

[1] According to a recent report, there are at least eight types of payment methods available to consumers: i) cards, ii) e-wallets, iii) online banking e-payments, iv) direct debit, v) pay later, vi) cash, vii) direct carrier billing, and viii) cryptocurrencies.

[2] Open invoices rely on the merchant delivering the goods with an invoice. Consumers can try the goods and either return them or pay within a time period, usually 14 or 28 days.

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