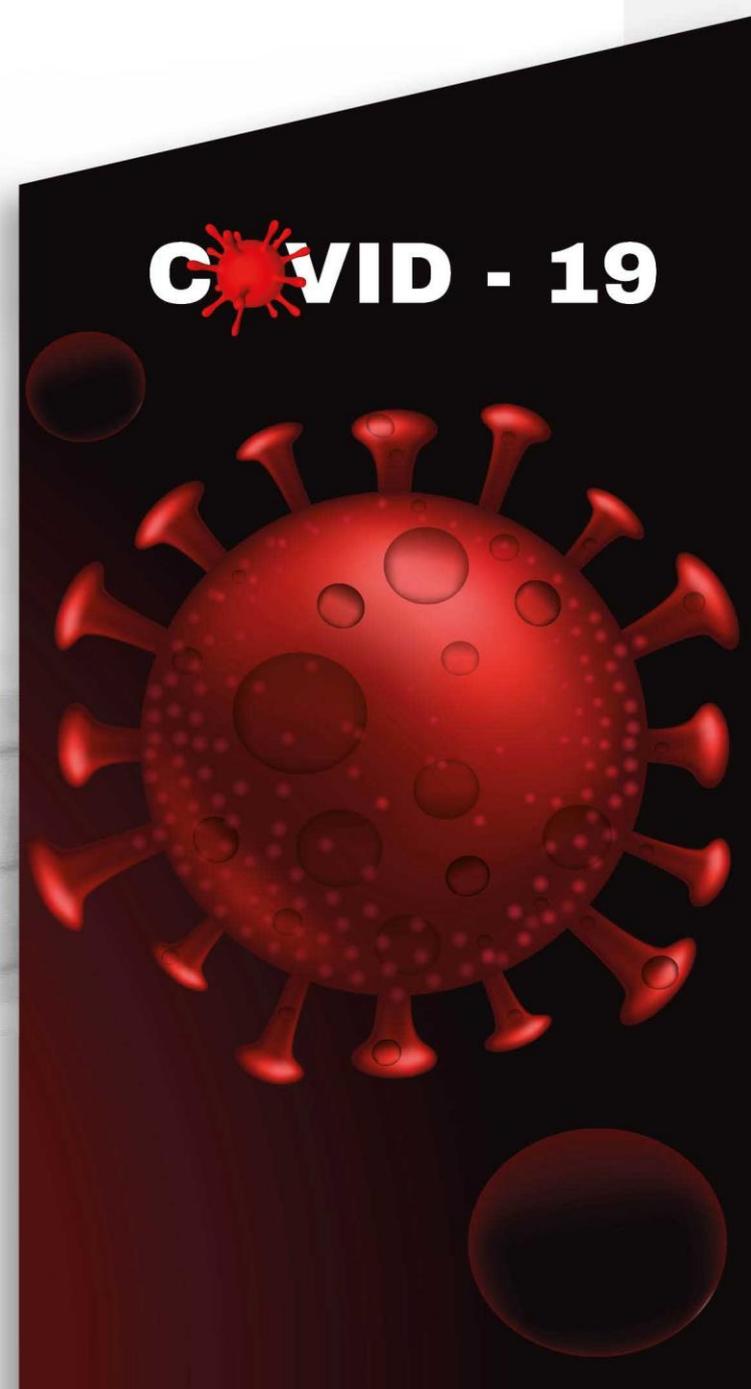




DIGITAL ECONOMY UPDATE

The COVID-19 Crisis: Accentuating the Need to Bridge Digital Divides

6 APRIL 2020



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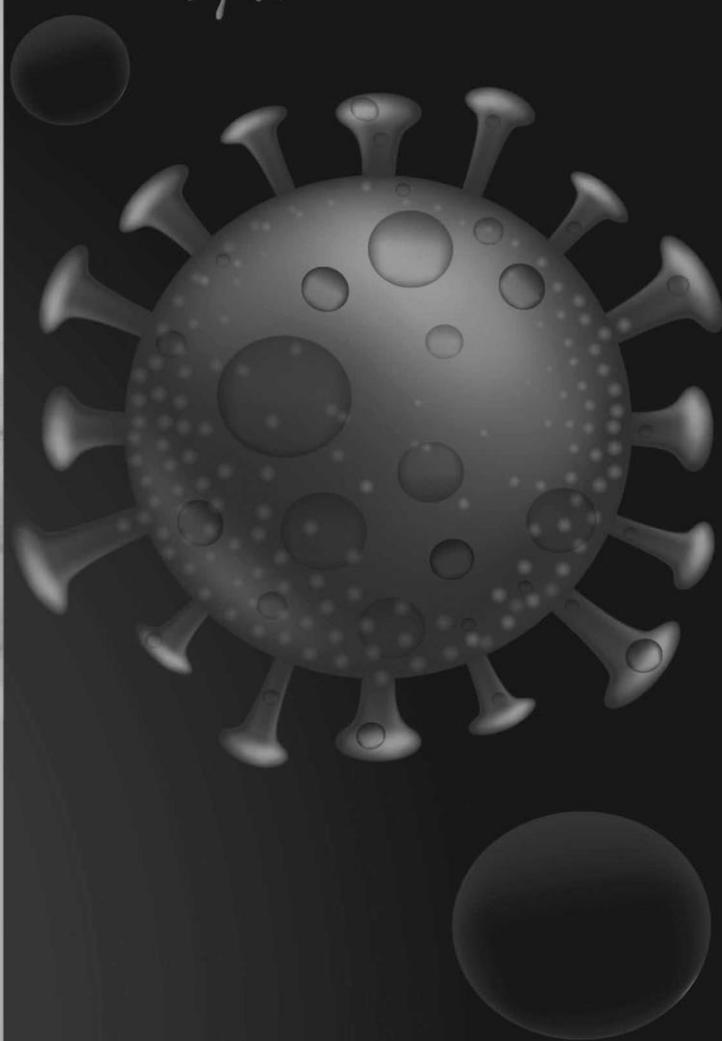
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6 APRIL 2020



COVID - 19



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The COVID-19 Crisis: Accentuating the Need to Bridge Digital Divides

The spread of the latest strain of the coronavirus (COVID-19) is disrupting economic and social life in multiple ways and dimensions. This crisis is unfolding at a time characterized by rapid digitalization, which is helping in the decision-making process regarding response and adaptations to the situation by governments, businesses and consumers. However, differences in digital readiness hamper the ability of large parts of the world to take advantage of these technologies. Multilateralism is vital in a world facing critical development challenges.

Crisis outbreak in a new digital landscape

Some comparisons with the situation at the time of the 2008 financial crisis help to illustrate how fast the digital landscape has changed¹:

- While the iPhone was introduced in 2007 and the first Android versions in 2008, there are now more than 3.2 billion smartphone users.
- The number of Internet users has surged from 1.6 billion to 4.1 billion, and Internet user penetration from 23% to 54%.
- The number of Facebook users has grown from 100 million to 2.4 billion.
- The number of online shoppers has more than doubled and the value of business-to-consumer (B2C) e-commerce has surged from less than \$1 trillion to more than \$3.8 trillion.
- Global Internet Protocol traffic (a proxy for data flows) has surged from 4,000 GB per second to 100,000 GB per second.
- The combined market value of Amazon, Apple, Facebook, Google and Microsoft, which was about \$500 billion in 2008, peaked before the COVID-19 crisis erupted at more than \$7.5 trillion.

Implications of the COVID-19 crisis

The enhanced level of digitalization of many economies manifests itself in various ways in the current crisis. With governments, businesses and organizations responding by imposing travel restrictions and social distancing measures, digital solutions are increasingly explored to continue some of the economic and social activities remotely. Digitalization is allowing telemedicine, telework and online education, increased communications in the lockdown situation, enabling shopping online as well as generating more data on the expansion of the virus and helping information exchanges for research.

a) More teleworking and online conferencing

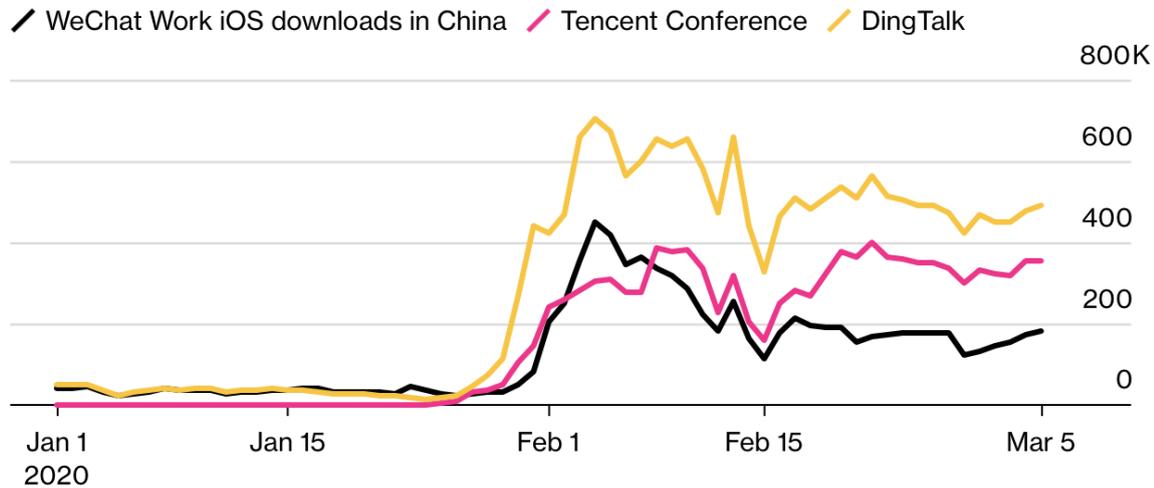
Around the world, workers – including those at UNCTAD – have been asked to work from home and replace physical meetings with online video conferencing and messaging. The demand for Microsoft Teams, Skype, Cisco's Webex and Zoom has surged. According to Microsoft, the numbers using its software for online collaboration climbed nearly 40% in a week.² In China, the use of digital work applications from WeChat, Tencent and Ding took off at the end of January when lockdown measures started to take effect (figure 1).

¹ Data are sourced from UNCTAD, ITU, Cisco, Financial Times and Facebook.

² "Big Tech Could Emerge From Coronavirus Crisis Stronger Than Ever", *New York Times*, 23 March 2020.

The power and user-friendliness of such services are today vastly higher than they were a decade ago. It is likely that their widespread use triggered by this crisis may have long-term implications as more people and organizations become used to them.

Figure 1: Use of selected remote work applications in China, 1 January – 5 March 2020, number of users.



Source: Sensor Tower

Digitalization has also allowed schools to continue with some remote education activities. As the lockdown in many countries does not allow for teaching in the schools, they can to a certain extent do it remotely. Digital tools and online trainings allow teachers to stay in contact with their students to ensure that this situation does not affect significantly their learning progress. However, the capacity of students to benefit from remote teaching may be unequal due to different home-based access to Internet connectivity, different capacities of parents to support the children, as well as various levels of preparedness of schools to dealing with this challenge.

Greater reliance on such online work applications creates an increased interest in using cloud solutions for storing and analyzing the data created, renting space from tech companies such as Amazon Web Services, Microsoft, Tencent and Alibaba.

At the same time, the combination of more teleworking and online conferencing is raising security concerns. People working from home often have fewer security defences in their home networks than they would have at their workplaces. There have been rising incidents of coronavirus phishing scams since January 2020. Moreover, in March, the Brno University Hospital in the Czech Republic—a major COVID-19 testing hub—suffered a ransomware attack that disrupted operations and caused surgery postponements.³ This points to the need to pay close attention to the possible security implications of the evolving use of digital tools.

b) Digital information sources

Social media platforms, such as Twitter, Facebook and WeChat, are increasingly used as sources of information on the crisis and as a way of staying in touch with relatives, friends and colleagues when physical meetings become restricted. In China, thousands of WeChat groups have been established among communities, companies and non-governmental organizations, bridging the gap between people in need and people who can help.⁴

On the downside, while social networks are very useful for information exchange, they are also the source of misinformation in the form of “fake news”. It is important that digital

³ “Coronavirus Sets the Stage for Hacking Mayhem”, *Wired*, 19 March 2020.

⁴ “Head in the Cloud”, *Beijing Review*, 20 February 2020.

platforms step up to avoid that what WHO has qualified as “infodemic” adds to this crisis.⁵

c) **Looking for a cure**

In China, digital platforms have also stepped in to support the development of new cures. Alibaba Cloud announced that it would make its Artificial Intelligence computing capabilities available for free to help scientific research into new medicines and vaccines for the virus. Baidu has made its computing and software resources available to gene testing organizations and scientific research institutions all over the world. And Tencent Cloud has given a research team at Sun Yat-sen University in Guangzhou, Guangdong Province in south China, free access to its cloud server and provided computing power and object storage capacity for a research team at Tsinghua University to help them conduct offline computing tasks for gene measurement.⁶

Similar efforts have been made in the United States, where the White House has partnered with digital platforms such as IBM, Google, Amazon and Microsoft to unleash the power of American high-performance computing systems to allow researchers to run very large numbers of calculations in epidemiology, bioinformatics, and molecular modelling.⁷

d) **Shift in consumption behaviour**

Another response by stakeholders has been a shift, where possible, to electronic commerce over physical retail and service provision. In the United States certain items have witnessed strong growth, including food orders, pet food, toilet paper and some kinds of medicine. According to data from e-commerce ad technology provider Pacvue, there are surges in Amazon searches for products like hand sanitizer and antibacterial soap.⁸ Chinese online retailer, JD.com, reported that its online grocery sales grew 215% year-over-year to 15,000 tons during a 10-day period between late January and early February.⁹

While most industries have seen a dramatic decline in activity, with measures to downsize the workforce as a result, some e-commerce companies have had to hire more people to cope with a surge in demand. In the United States, Amazon has reportedly been hiring an additional 100,000 warehouse workers to meet surging demand.¹⁰

Another area that has seen a spike in demand is movie streaming, putting pressure on the broadband networks of cities and countries. As cinemas and theatres close under government orders in several countries, Netflix, HBO, YouTube and other streaming services are gaining a new audience. School closures may have added to growing demand in this domain, as children and youth spend more time at home.

e) **Not all digital platforms are benefiting**

Some other digital platforms have been very negatively affected by the crisis, especially those that are related to travel and mobility. Examples include ride-hailing services, such as Uber, Lyft and Didi Chuxing, as well as property-rental services, such as Airbnb and Booking.com. Indeed, the travel and tourism industry is among the worst hit by the crisis. Overall, in the context of the gig economy, many “workers” lack proper labour protection and will therefore be especially vulnerable to slowdown in economic activity due to the coronavirus.

⁵ See Here’s how social media can combat the coronavirus ‘infodemic’ at <https://www.technologyreview.com/s/615368/facebook-twitter-social-media-infodemic-misinformation/>, and How to fight an infodemic at <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2930461-X>

⁶ “Head in the Cloud”, *Beijing Review*, 20 February 2020.

⁷ See IBM, Amazon, Google and Microsoft partner with White House to provide compute resources for COVID-10 research, *Tech Crunch*, 23 March 2020.

⁸ Source: eMarketer, <https://www.emarketer.com/content/coronavirus-covid19-boost-ecommerce-stores-amazon-retail> .

⁹ Source: eMarketer, <https://www.emarketer.com/content/coronavirus-china-us-covid-19-impact-retail-travel> .

¹⁰ “Big Tech Could Emerge From Coronavirus Crisis Stronger Than Ever”, *New York Times*, 23 March 2020.

f) Protecting privacy

The outbreak of the coronavirus crisis has also drawn attention to the privacy and data protection debate. Many governments have recently adopted new data protection regulations in response to increased digitalization and the need to safeguard the privacy of individuals and companies. The expanded collection of data from different human and economic activities online can allow for mass surveillance, by both companies and governments.

However, under current circumstances, some governments may face a trade-off between strict data privacy protection regulations and the need to meet certain public health objectives. Digital technologies can, for example, help to track the spread of the virus and trace contact with affected people. The challenge is to find the middle ground between data privacy and the need for individual data for disease monitoring. If governments choose to loosen data privacy regulations, it may be appropriate to do so on an exceptional and temporary basis, with the specific objective of fighting the disease and preventing infection.¹¹

Building the capacity to leverage digitalization: Policy lessons

Changes in behaviour resulting from the COVID-19 crisis are likely to have lasting effects also when the economy starts to pick up. As more people and organizations become accustomed to relying on digital solutions, they can be expected to continue using them to a greater extent than pre-crisis.

Most digital solutions are offered or supported by a relatively small number of mega-digital platforms, mainly originating in United States and China. The further shift towards the digitalization is thus likely to further strengthen their market positions. As noted in UNCTAD's *Digital Economy Report 2019*, in 2017, the top seven digital platforms already accounted for two-thirds of the value of the world's digital platforms with a market capitalization of at least \$100 million. They benefit from network effects and from their ability to extract, control and analyse data. These data are then transformed into digital intelligence that can be monetized in various ways.

While growing use of data and digital platforms offers opportunities to overcome some development challenges, including those health-related ones, it is not without its challenges from the perspective of development.

Despite the rapid uptake of digital technologies, significant divides remain, both between and within countries. The least developed countries (LDCs) are the most vulnerable to the human and economic consequences of the pandemic, and they also lag behind the most in digital readiness. Only one in five people in LDCs use the Internet, and in most developing countries well below 5% of the population currently buy goods or services online. Lack of Internet access at home also limits the possibilities for students to be connected if schools are closed. Insufficient quality of broadband services is hampering the ability to use teleconferencing tools.

As shown by UNCTAD in [eTrade Readiness Assessments](#) conducted by UNCTAD in LDCs, there are significant gaps and barriers in several policy areas – ranging from ICT infrastructure and payment solutions to skills and legal frameworks – that need to be

¹¹ See Coronavirus is forcing a trade-off between privacy and public health at https://www.technologyreview.com/s/615396/coronavirus-is-forcing-a-trade-off-between-privacy-and-public-health/?truid=50ee19d7847dcf703a8fb1a0d2e1c5ea&utm_source=the_download&utm_medium=email&utm_campaign=the_download.unpaid.engagement&utm_content=03-25-2020; Government efforts to track virus through phone location data complicated by privacy concerns at <https://www.washingtonpost.com/technology/2020/03/19/privacy-coronavirus-phone-data/> and EDPB

Statement on the processing of personal data in the context of the COVID-19 outbreak at https://edpb.europa.eu/news/news/2020/statement-processing-personal-data-context-covid-19-outbreak_en

overcome to enable people and businesses to engage fully in the digital economy. For example, the quality and affordability of broadband connectivity – especially in rural areas – typically must be greatly enhanced to take advantage of many online conferencing services on the market. There is a need to strengthen the protection of users and consumers to boost trust in online commerce. Efforts to strengthen cyber security are equally important.

Notwithstanding these weaknesses, developing countries are exploring possible opportunities with e-commerce and other digital solutions. In Senegal, for example, the Minister of Trade and SMEs has invited stakeholders to propose innovative solutions and ideas to foster home delivery of food and hygiene and health products necessary to fight the spread of the virus. He also plans to create a platform to federate SMEs with digital delivery capacity to support the distribution of essential goods.¹² In Kenya, the Government is leveraging mobile money solutions to enable transactions without face-to-face interactions. Initiatives like these can help build local resilience to future shocks.

Against this background, much more attention should be given to bridging existing and emerging digital divides to allow more countries to take advantage of digitalization. If left unaddressed, the yawning gap between under-connected and hyper-digitalized countries will widen, thereby exacerbating existing inequalities. Differences in digital readiness and the high concentration of market power in the digital economy underline the need for new policies and regulations aimed at ensuring a fair distribution of the gains from digital disruptions. As with the coronavirus crisis and other development challenges, the world will need a coordinated multilateral response to deal with the challenge of digitalization.

¹² <http://www.osiris.sn/COVID-19-le-ministere-du-commerce.html>