

THE ROLE OF IT IN ASSESSING ECONOMIC OUTLOOK DURING THE COVID 19 PANDEMIC

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ABSTRACT

In this pandemic age, digital technology has the revolutionary capacity required to maintain the economy, helping it function and also provide people the means to access essential services such as health, education, job search, and culture. Digitization is a growing and lasting trend. The transformations it involves will bring us closer or we will separate more. Responses to the COVID-19 crisis underscore the important role that digital technology plays in promoting inclusive, fair and equitable societies, especially from an economic standpoint. We should also highlight that the digital divide is no longer a subject, but something that affects people's access to opportunities and inclusion in their communities. The COVID-19 pandemic was a violent shock, on a global scale. It forced individuals to stay at home, and stay away from each other outside, thus making a huge economical impact on a global scale. In many countries, businesses, factories, schools and governments were closed, and many have therefore found it difficult to earn a living, to continue their education and access important government services. In many cases, The Internet may have been the link that allowed families and friends to communicate and have fun, who made work possible from home, which allowed students to learn online and which provided tools for online services, including health advice and economic cooperation. This paper will provide an analysis of how IT can help assess the future economic outlook in a global scale.

Keywords: COVID 19, economy, Information Technologies, Digitalization, Communication, natural and mathematical sciences

INTRODUCTION

According to the OECD (Organization for Economic Co-operation and Development), with the COVID-19 epidemic, the world has turned massively to cyberspace, accelerating a digital transformation that began several decades ago. Schoolchildren equipped with their home internet connection inaugurated the school remotely, many employees embarked on telework, and a multitude of companies adopted digital-based economic models to continue their activities and save part of their profits.

In many countries, governments and businesses adapted a working ground usually based on three main pillars: digital government, digital economy and digital society. These objectives are ambitious: the digital economy will have to represent a crucial part of the national GDP, nevertheless, digital transformation is an inevitable trend in business, and the health crisis has accelerated this process. The COVID-19 pandemic is still ongoing, causing strong socio-economic impacts. In this context, new emerging technological trends will play an important role in helping companies to develop in the post-COVID-19 era.

In many countries of the world, while most areas of life are affected by the epidemic, cash-free payment has become a "rescue buoy" for many socio-economic activities where direct contact must be limited. Many countries have quickly put in place policies to promote non-cash payments. Using electronic wallets or paying via mobile phones is also a preferred solution for many consumers. The pandemic is accelerating changes in the habit of consumer payment. For the economy, using less liquidity means saving on social costs. According to The Economist's analysis, the annual cost of cash management is generally around 0.5 to 1% of GDP. The development of online payment brings buyers and sellers together, and contributes to developing the economy, to improve the standard of living of families, create jobs and contribute to the increase in budget revenue. For the company, payment via banks clearly guarantees the safety and security of the parties, and the interests of people are protected in the event of litigation. More payments through banks also help increase the transparency of the economy, to

limit underground economic activities, acts of corruption, tax fraud, etc. Economic experts have said that in the future, digital payment will gradually replace cash. One of the trends of the post-Covid era will clearly be the emergence of a more digital financial system.

THE BOOM OF CLOUD COMPUTING

Before the pandemic, homework was little practiced, with employers wishing their employees to come on site to perform tasks under the supervision of their superiors. COVID-19 has completely changed the game. Companies are now encouraging their employees to work at home and send their documents or projects via the cloud.

Recently, the demand for online meeting tools such as Zoom, Microsoft Teams, Google Meet and Slack has increased at an unprecedented rate. More traditional office work tools such as Microsoft 365 have also increased demand. The common point is that these tools are all based on the cloud. Since people are forced to stay at home, the demand for retail and online entertainment services has also exploded. Entertainment services using cloud computing technology such as the Netflix film streaming platform, Spotify music service and some game platforms like Steam have all jumped in enrollment. The tendency to switch to cloud platforms is also manifested in government activities. In order to limit the spread of the disease, many countries have accelerated the process of digitizing its administrative activities, creating portals and supporting the development of national digital platforms.

Before the epidemic, a report by the investment consultancy McKinsey showed that 92% of companies said that their business models should evolve towards digitization. However, while most companies are aware of this, the investments and efforts required for this transition are still below other commercial needs. When the pandemic has struck, a June 2020 McKinsey report found that the adoption of digital technology by consumers and businesses had been as important in eight weeks as in the previous five years. The emergency has resulted in much progress in the digitization of chains of supply, because demand for electronic commerce exploded. Manufacturers' efforts to produce the equipment necessary for anti-epidemic operations have also accelerated this process. In addition, companies also face internal pressures to make operations more efficient, integrated and reactive in order to meet consumers' expectations. This has led to a change in the way companies assess suppliers and sources. In general, companies prioritize imports from multiple suppliers. As more and more data on suppliers and their products are accessible, their digitization gives companies more information for a better and more dynamic selection of suppliers. This allows companies to source easily on demand and facilitates the entry of new suppliers into the market.

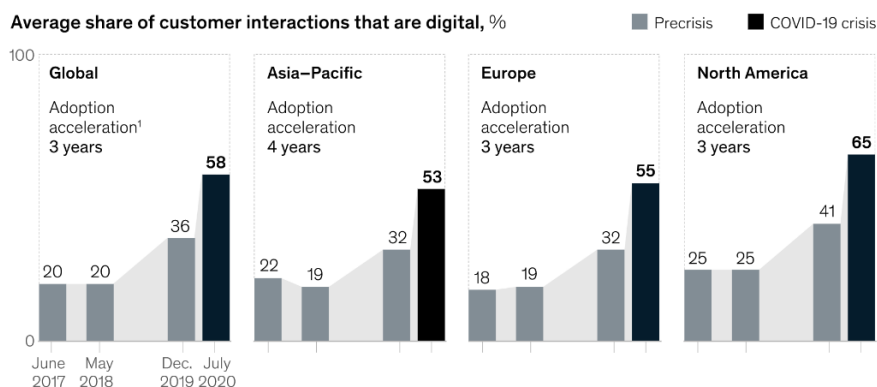


Fig. 1 Average Share of Customers that Are Digital¹

¹ <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever>, Accessed on March 3, 2022.

Average share of products and/or services that are partially or fully digitized, %

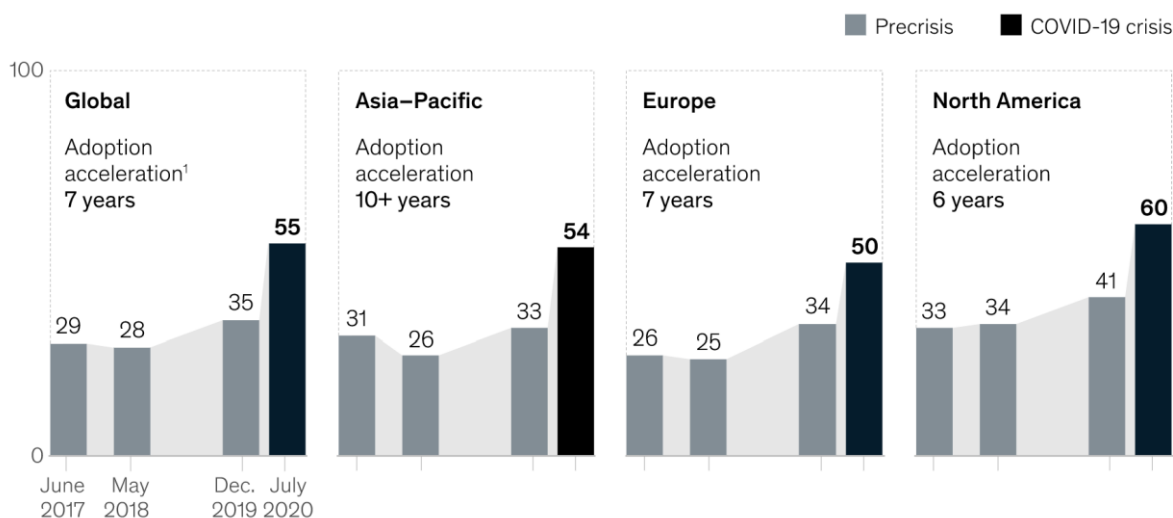


Fig. 1 Average Share of Products and Services that Are Partially Digitized²

THE RISE OF DIGITAL ECONOMY

The Covid 19 crisis has had many effects, both in its health dimension and in economic and monetary responses. But these effects are different depending on the country, the economic sectors and the individuals.

First, the health crisis accelerates the role of Asia as the main world economic center and confirms the major role of the United States as the only global "hyperpower", to use the expression of Hubert Védrine.

The Covid-19 epidemic opens a new economic cycle. Liberal policies since the 1980s are replaced by accommodative monetary policies and fiscal stimulus, in economies where inflation seems to be close to zero due to downward pressure on prices by global competition. Joseph Biden, the American president, has become the figurehead of this new economic policy. It aimed to bring growth to 6.5% of GDP and to restore full employment by the end of 2021 by a fiscal stimulus plan of 14% of GDP, coupled with an investment program of 2.250 billion dollars in infrastructure and energy transition. In France, 424 billion euros were mobilized, between 2020 and 2022, to face the health crisis and revive the economy.

Finally, the Covid-19 plays an accelerating role in the rise of the digital economy, in the ecological transition and in the investments of the key sectors which responded to the crisis (pharmaceutical industry, essential services, etc.), to the detriment of the most affected sectors such as air transport or tourism.

FACING THE DIFFERENCES

However, this economic differentiation will continue in the coming months due to several factors. On the one hand, the countries which have vaccinated their populations the fastest, like Israel, the United States and Europe, will experience a rapid economic recovery. On the other hand, the amounts of the American and European recovery plans will support demand and investments, especially in digital technology and ecology. Finally, the pursuit of accommodative monetary policies will make it possible to continue to bring the rise in stock prices, while keeping interest rates close to zero. The main macroeconomic threat remains the resumption of inflation in the United States.

The pandemic is accelerating the transition to an increasingly digital economy. Large corporations have benefited from these transformations, like Amazon, which has enabled many businesses to continue operating. For Google,

² <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/how-covid-19-has-pushed-companies-over-the-technology-tipping-point-and-transformed-business-forever>, Accessed on March 3, 2022.

the situation is more mixed. Admittedly, the revenues of its Cloud increased but the advertising revenues, linked to the pre-crisis economy, decreased.

The ecological transition will experience an unprecedented acceleration, whether in terms of development of the electric vehicle (Europe invested nearly 60 billion euros in electric mobility in 2019), energy renovation of buildings or development of renewable energies. Despite the pandemic and the economic recession, renewable energies increased by 6% in 2020.

Other economic sectors are also affected by the health crisis. The pharmaceutical industry will experience a powerful development in the coming years thanks to the RNA technology, used in anti-Covid vaccines, which could be used against many serious diseases, including cancer. The luxury industry is experiencing a higher market valuation and its prospects are mainly borne by the Chinese market, which had grown by + 45% in 2021, due to the desire for consumption of the middle class.

The Covid-19 epidemic, from which the world should gradually emerge in the coming months thanks to vaccination, will probably mark a profound transformation of our economic and social systems, accentuating the transition to a more digital and less carbon-based economy, thus making IT the crucial driving force behind these changes.

PREPARING FOR THE FUTURE

The COVID-19 crisis has highlighted the role that the digital economy can play in a country. First, it is useful during the crisis, as it provides information and access to services to isolated people at home, and helps people who have to leave their homes to practice social distancing. It can also help businesses sell goods and services on the Internet and help develop essential government services. Countries with a robust digital economy can respond relatively quickly to the needs created by the crisis and those with a digital economy that is still developing should take advantage of the crisis to encourage development.

Digital payments which are the key element of the digital economy can play several important roles during and after the crisis. To begin with, they allow remote transactions for e-commerce, which allows individuals to shop without leaving their homes. Second, electronic payments can contribute to social distancing when individuals have to pay something in person, by avoiding giving cash. Finally, they can allow direct transfer of money from government to individuals, especially those who have lost their jobs, to ensure that they have the resources to survive.

In countries with mobile financial services, it can be relatively easy to do what is necessary, even if it is possible to offer incentives for their use. In Egypt, for example, to promote electronic payments, mobile operators offer users 30 times the number of minutes or data units billed by online payment. In Jordan, the government is taking steps to develop the acceptance and use of mobile digital portfolios to reduce the use of cash.

Governments can also reduce taxes on mobile financial transactions when it is useful to support their use, and accept mobile payments for government services to build consumer confidence and promote their adoption.

The development of digital payments in countries that do not have access to them can take longer, as regulatory barriers can play a role in the cost of developing these services. However, the crisis can provide the impetus necessary to launch this process, which is in any case essential for the development of a digital economy.

As for the maintenance of commercial activities, many companies have had to close to comply with the requirements of social distancing, while others have seen their room for maneuver severely restricted. Internet efforts to help businesses are welcome and, in a way, essential.

Employees of companies that have gone online must have access to it, which is why we emphasized its importance in this paper. But it is also crucial that companies themselves have access to the Internet and the ability to access the tools necessary for virtual business management. Qatar, for example, gives free access to professional collaboration tools to small and medium-sized enterprises (SMEs), via the Microsoft cloud platform.

At the same time, companies in financial difficulty may find it difficult to continue making payments, even for crucial online services. To address this problem, some governments prohibit operators from suspending or interrupting service to small businesses in default. For example, The Bahrain Telecommunications Regulatory Authority has removed the redline for fixed Internet data offers to contribute to business continuity.

These measures are appropriate short-term reactions. In the longer term, companies need to develop business continuity plans to adapt to any future containment, and perhaps also new business management plans for after the pandemic. The existence of a national digital economy can contribute to the creation of online tools.

CONCLUSION

Internet usage evolved in several significant ways during the crisis from COVID-19. First, total traffic was increasing due to the increase in demand on the network for personal and professional uses. This increase is the fruit of another development, which concerns the content and services used: the increase in the use of videoconferencing in the professional and educational world, as well as in content broadcasting service, online games and other entertainment applications requiring high bandwidth. Usage patterns have also evolved, and peak moments are now spread over the days of the week, with less difference between weekdays and weekends.

According to GSMA (Global System for Mobile Communications Association), the organization which aims to represent various interests of mobile network operators around the world, global data traffic has increased by 30%. In some countries, for example, domestic Internet consumption increased by more than 80 % and 20% for mobile Internet. This of course led to a reduction in the speed of fixed and mobile broadband in many countries, while the networks sought to respond to this sharp increase in demand. However, operators in some countries have managed to meet this new demand by increasing the speed of flow.

Interconnection and data infrastructure can help reduce the capacity needs of national and international riders. This leads to a marked difference between countries that have data centers and countries that do not have it, as it takes time to build. After acquiring these essential infrastructures, countries can attract investment in data centers and consolidate the activities necessary for the development of a long-term IXP. This will be crucial for the digital economy to develop accordingly.

For a country with one or more commercial data centers, it is not certain that short-term changes are necessary, except, where appropriate, the continuation of projects in progress if the current imperatives of social distancing allow it. Data centers are generally designed to be resilient and to meet increased demand, and there is no evidence that they will be a source of problem during the crisis.

Much of the Internet infrastructure, both for access and for data, cannot be changed currently. This is partly due to the scale of resources and time required to build infrastructure, and partly due to the challenge of security of infrastructure deployment during a pandemic and the financial pressure faced by operators.

However the case may be IT tools and services are the basis upon which countries around the world should develop their economies and have a more qualitative outlook for the future ahead.

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