DIGITAL TRANSFORMATION IN EUROPE



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A CEBR REPORT FOR ETORO DECEMBER 2020

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London, December 2020





DIGITAL TRANSFORMATION IN 2020 AND BEYOND

To call 2020 a strange year would be to understate the impact of a series of events that will ripple through the next decade. From work to family, money to media, how we engage with almost everything in our lives has changed.

I've spent the year talking About digital adoption. About how the world's collective foot hit the pedal and we embraced in a few weeks technology that would otherwise have taken a few years to pervade our daily lives. It's a story that, as a global investment platform, eToro has been right at the heart of.

When COVID-19 hit the West, fiscal stimulus pumped almost unchecked into the global markets. Travel, hospitality and energy stocks nose dived as whole industries ground to a halt. For the first time ever, we saw retail investors swarm in where professionals held back, looking for a bargain in hard-hit sectors that could again rise once the threat of the virus retreated.

Financial markets dominated media headlines, prompting retail investors to engage with the markets, many for the first time – it's a paradigm shift that is here to stay. eToro has seen over 4 million new registered users in 2020, and we're far from alone.

This report spans nine European markets, and in each around 10% of people invested more during the pandemic. Crucially, 15% expect to invest more in the years to come than they did before COVID-19, a figure that rises even higher in Italy and Romania. One of the lasting impacts of the pandemic will be this secular trend, a rise in the number of retail investors across Europe that engage with capital markets and actively manage their own portfolios.

In commissioning this research, our goal was to provide a snapshot of digital penetration in Europe and attitudes to digital transformation. We were keen to understand what impact this year would have going forward. Would we see a backlash as people struggled to keep up with the expedited pace of adoption? What are the roadblocks that could halt innovation, and in which industries do consumers support increased digitalisation?

I'm confident that we've succeeded in answering all of these questions and more. My own key takeaway is just how much adoption is driven by a desire to connect with each other. Over 40% of those surveyed agreed that their use of digital technologies is influenced by those around them. It is the starting point for the 'virtuous cycle' identified in these pages, whereby increased adoption leads to enhanced capabilities that in turn increases confidence and promotes further adoption.

Our future will be digital, and the vast majority agree that technology will make our lives easier. However, for that world to succeed we must not lose sight of the human element at the centre of this transformation. We know that concerns around misinformation and data protection have already prompted action among millennial and gen z cohorts. We know that the risks posed by a digital divide aren't limited to individuals, but to whole countries. The viability of our digital future therefore relies on our ability to ensure this new world is inclusive, moral and – ultimately – human.



EXECUTIVE SUMMARY

This report combines data from a survey of more than 18,000 Europeans together with external public datasets to shed new light on the state of digital transformation across Europe. Through the development of the Digital Transformation Index, nine European countries (Denmark, France, Germany, Italy, the Netherlands, Poland, Romania, Spain and the United Kingdom) are ranked based on their current levels of digital penetration and their potential for digital growth. Digital engagement and potential are analysed across a diverse range of sectors including finance, health, retail and entertainment, to provide holistic insights into digital transformation in each country.

THE KEY FINDINGS INCLUDE:

DENMARK LEADS THE WAY with the highest share of e-commerce sales and the most widespread use of digital platforms for banking and interacting with public authorities. **Spain has the second highest score in** the Digital Transformation Index, driven by high levels of digital readiness.

THE UK HAS THE HIGHEST LEVEL OF DIGITAL PENETRATION based on present

indicators, although the country ranks third overall in the Digital Transformation Index due to a weaker performance in the forward-looking indicators. Card payments are significantly more prevalent in the UK than elsewhere in Europe, while the use of digital platforms for educational purposes is also highest in the UK.

THE LOWEST RANKED COUNTRIES in the Digital Transformation Index are Romania and Italy.

Romania has the lowest level of digital penetration at present but also has the highest potential for growth out of the countries analysed, with strong public support for digital expansion. Italy's position at the bottom of the rankings reflects a low level of digital penetration together with a high degree of resistance to future digital transformation, with 36% stating that they would oppose the expansion of digital technologies at work.



THE SURVEY REVEALS NUMEROUS KEY INSIGHTS INTO EUROPEAN TRENDS IN DIGITAL TRANSFORMATION:

BENEFITS OF DIGITAL TECHNOLOGIES:

There is a broad consensus surrounding the benefits of digital technologies, with nearly three in four (72%) stating that digital technologies make their life easier. This share is highest in Poland, at 87%, and lowest in Germany, at 56%

ENGAGEMENT WITH DIGITAL TECHNOLOGIES:

The online banking is the digital technology that Europeans engage with most regularly, with nearly a quarter (23%) using the technology on an everyday basis. Confidence with digital technologies increases with the frequency with which they are used. This points to a virtuous cycle whereby increased technological adoption enhances technological capabilities, which in turn promotes even higher rates of uptake.

DIGITAL CONCERNS:

The survey identifies several widely held concerns, which could inhibit the further expansion of digital technologies. 97% said they had some concerns about the risks of cybercrime, while 96% indicated that the use of digital technologies to spread fake news was of some concern. Older age groups are particularly worried, with 37% of respondents aged 55 or over stating that they are extremely concerned about the role of digital technologies in spreading fake news.

DIGITAL POTENTIAL:

The majority of Europeans are supportive of increasing digitalisation across all of the sectors analysed, with the strongest support for digital expansion in the energy and finance sectors. However, Europeans express discomfort about using digital solutions that are currently not well established. For instance, less than half (44%) of respondents would feel comfortable carrying out routine doctor's appointments via video call.

COVID-19 IMPACT:

The pandemic has accelerated digital transformation across Europe, with more than a third (36%) of survey respondents having increased their use of digital technologies outside of the workplace. These behavioural shifts appear to have imparted long-term changes in preferences and habits, with more than a quarter (27%) expecting their use of digital technologies outside of the workplace to be higher after the pandemic than it was before.

Covid-19 is set to have a particularly large impact on digital adoption in the health sector. In Italy, nearly one in five (19%) expect to carry out most of their doctor's appointments online, even after the pandemic is over. The survey results point to similar (albeit less pronounced) trends elsewhere in Europe.

In one area, the experience of the pandemic will likely push Europeans away from digital technologies, with a lower share of respondents expecting to use digital platforms to talk to friends after the pandemic than they did going into it.



INTRODUCTION

THROUGHOUT HISTORY, TECHNOLOGICAL INNOVATION HAS BEEN THE BEDROCK OF ECONOMIC GROWTH.

While government policies, geopolitical developments and natural disasters all affect economic progress, sustainable and long-term growth requires improvements in technology that increase the amount that an economy can produce. In the 18th century, inventions including the flying shuttle, the steam engine and paper-making machines transformed sectors such as textiles and printing from small-scale cottage industries to ones characterised by mass, centralised production. In the 19th century, the invention of electricity, internal combustion engines and new steel production methods facilitated major advances in transportation and communication systems, while the spread of computers in the 20th century paved the way for yet further levels of automation and productivity gains.

Fast forward to 2020 and economies across the world are on the cusp of another technological revolution, this time fuelled by the expansion of digital technologies. While the propagation of the internet and smartphones have already transformed both consumption habits and production methods, we remain at the foothills of the digital revolution. With fields such as artificial intelligence and big data still in their relative infancy, vast swathes of the economy have only scratched the surface of the potential offered by digital technologies.

This report is a pan-European study of the impacts that digital technologies currently have in a range of European countries and their capacity for future deployment and adoption. Integrating new and developing digital technologies into economies and societies in a way that boosts productivity while remaining inclusive and accessible will be central to achieving sustainable economic growth in the 21st century. The Digital Transformation Index shines a new light on levels of digital penetration and potential growth across Europe. The Index ranks nine European countries (Denmark, France, Germany, Italy, the Netherlands, Poland, Romania, Spain and the United Kingdom) based on the impact that digital technologies are currently having on each country's economy and society and the potential that these technologies have to grow further in the coming years.

THE DIGITAL TRANSFORMATION INDEX CAN BE DECOMPOSED INTO TWO SUB-INDICES:

The Digital Engagement Index, which maps out the current state of play of digital transformation, and;

The Digital Growth Index, which assesses the potential for the expansion of digital technologies in the future. The potential for digital transformation is driven by levels of public support for an expansion of digital technologies, together with businesses' and governments' capacity to provide the digital products and infrastructure necessary to fulfil this demand. The Digital Growth Index focuses on the consumer side of the digital transformation puzzle, by evaluating public appetite and readiness for increased digitalisation. Therefore, it is important to note that while the Growth Index provides important insights into the potential for future digital transformation, realising this potential will also depend on the digital products and infrastructure that are made available.

Each of these sub-indices are compiled from numerous indicators derived from a variety of official public datasets as well as original data obtained from a survey of more than 18,000 adults across the nine European countries 1.

This research also examines the role of the COVID-19 pandemic in accelerating digital transformation. The scale of the economic and societal disruption brought about by the pandemic and the associated lockdowns throughout Europe are set to leave an indelible mark on consumers' habits and preferences. In particular, the widespread closure of physical shops, banks, cinemas and gyms as well as the enforced social isolation have pushed millions of Europeans towards online platforms and digital solutions. This unprecedented acceleration in the take-up of digital technologies has been famously summarised by Microsoft CEO Satya Nadella, who opined in April 2020 that "we've seen two years' worth of digital transformation in two months". ²Using the results of the multi-country survey commissioned for this research, the report explores the degree to which the experiences of the COVID-19 pandemic will accelerate the pace of digital transformation across Europe.



DIGITAL TRANSFORMATION INDEX

The Digital Transformation Index evaluates the levels of digital penetration, engagement and potential across nine European countries (Denmark, France, Germany, Italy, the Netherlands, Poland, Romania, Spain and the United Kingdom) by incorporating a variety of present and forward-looking indicators. The present-looking indicators collectively form the **Digital Engagement Index**, which ranks countries based on the impact that a range of digital technologies – defined in this report as technologies that make use of the internet and / or items of hardware such as computers, smartphones and tablets – currently have within each country.

The forward-looking indicators constitute the **Digital Growth Index**, which assesses the potential for digital technologies to be deployed more widely in the future. The Digital Growth Index gauges the potential for digital transformation by exploring levels of public support and readiness for increased digitalisation. It does not directly consider the capacity and willingness of businesses and governments to provide new digital products and infrastructure, which is another important prerequisite for an effective digital transformation. The Digital Transformation Index is formed by combining each country's scores from the Digital Engagement and Digital Growth Indices.

METHODOLOGY

The Digital Transformation Index combines public datasets from the European Central Bank and the European Commission with bespoke survey data from more than 18,000 adults across the nine countries, thus providing a holistic and original perspective on the state of digital transformation in Europe.

Table 1 and Table 2 outline the indicators that comprise the Digital Engagement and Digital Growth Indices, respectively. Together, these form the indicators that feed into the overall Digital Transformation Index. For each country, every indicator is assigned a score from 0 to 100, where 100 represents the highest level of digital penetration or potential and 0 represents the lowest. The relevant indicator scores are then averaged to arrive at the Digital Engagement and Digital Growth Index scores for each country. The Digital Engagement and Digital Growth Index scores are then averaged to arrive at the overall Digital Transformation Index.

TABLE 1 DIGITAL ENGAGEMENT INDEX INDICATORS

INDICATOR	DESCRIPTION	SOURCE	
DIGITAL BENEFITS	Share of individuals who agree that digital technologies make their life easier.	BESPOKE SURVEY	
E-COMMERCE FOOTPRINT	Share of e-commerce sales as a percentage of total turnover.	EUROPEAN Commission	
USE OF INTERNET FOR HEALTH INFORMATION	Share of individuals that use the internet to acquire health-related information at least every three months.	EUROPEAN Commission	
DIGITAL PAYMENTS	Value of domestic and cross-border card transactions, scaled by GDP.	EUROPEAN CENTRAL Bank	
ONLINE INVESTING	Number of times per week that individuals use online investment platforms	BESPOKE SURVEY	
ONLINE BANKING	Share of individuals that use online banking at least every three months.	EUROPEAN Commission	
DIGITAL EDUCATION	Share of individuals that have participate in online courses at least every three months.	EUROPEAN Commission	
HARDWARE USE	Number of times per week that individuals use a selection of hardware items (smart speakers, wearable technologies and smart energy meters).	BESPOKE SURVEY	
SOFTWARE USE	Number of times per week that individuals use a variety of software (video streaming services, smart assistants via mobile devices).	BESPOKE SURVEY	
DIGITAL INTERACTION WITH PUBLIC AUTHORITIES	Share of individuals that interact with public authorities via digital platforms (e.g. voting, submitting forms etc.) at least every three months.	EUROPEAN Commission	

TABLE 2 DIGITAL GROWTH INDEX INDICATORS

INDICATOR	DESCRIPTION	SOURCE	
DIGITAL READINESS	Share of individuals who would feel comfortable with a selection of digital technology applications.	BESPOKE SURVEY	
DIGITAL SUPPORT	Share of individuals who are supportive of increased digitalisation in a range of sectors (finance, health, entertainment, retail, energy).	BESPOKE SURVEY	
DIGITAL GATEKEEPERS	Share of individuals that would resist the expansion of digital technologies in their workplace.	BESPOKE SURVEY	
DIGITAL CONCERNS	Average levels of concern about a selection of digital issues.	BESPOKE SURVEY	



EUROPEAN DIGITAL TRANSFORMATION RANKINGS

The results of the Digital Transformation Index expose significant variation between countries both in terms of the levels of digital penetration at present and the potential for growth. The remainder of this section discusses the results for each of the nine European countries, identifying the areas in which they perform relatively well and the areas where there is room for further progress.





DENMARK LEADS THE WAY

Denmark tops the Digital Transformation Index rankings, with a score of 58. The country has the second-highest score in the Digital Growth Index as well as the second-highest score in the Digital Engagement Index, signalling that Denmark performs consistently well across the indicators analysed. Denmark leads the way in many of the digital penetration indicators, with the highest share of e-commerce sales out of the countries studied, as well as the most widespread use of digital platforms for banking and interacting with public authorities. The survey results also show that Danes are relatively open to the expansion of digital technologies in their workplaces. Moreover, while there are widespread concerns surrounding digital technologies, these concerns are less intense in Denmark than they are in most other parts of Europe.





SPAIN TAKES SECOND PLACE

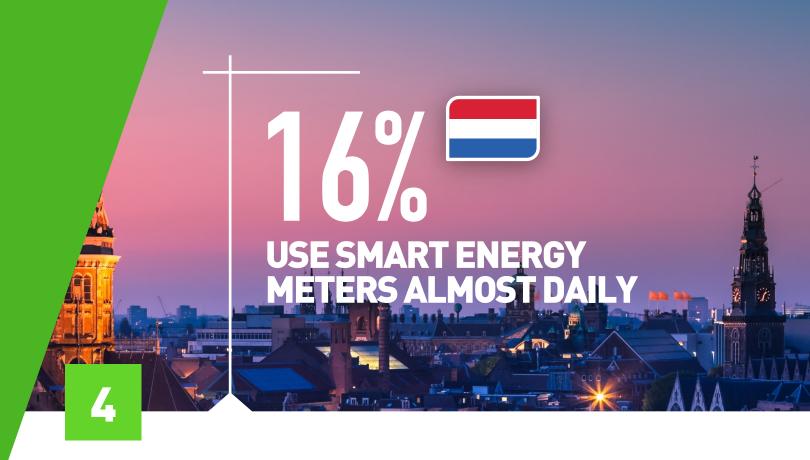
Spain is the second-highest ranked country in the Digital Transformation Index. As with Denmark, consistency is the key to Spain's relative success in the Index. Indeed, while Spain ranks below the UK in terms of the current penetration of digital technologies (as measured by the Digital Engagement Index), it makes up ground in the Digital Growth Index. The Spaniards surveyed use a selection of hardware items and software more frequently than their counterparts in any of the other countries analysed. The country also ranks first in levels of engagement with online investment platforms. Turning to the Digital Growth Index, Spain ranks first in the digital readiness indicator, with a high share of individuals feeling comfortable with transitioning to an array of digital solutions such as online streaming services and virtual property viewings. However, concerns about digital technologies are also higher in Spain than in any of the other countries. Indeed, 40% of Spaniards are extremely concerned about the misuse of digital technologies to disperse 'fake news', while 35% say they are extremely concerned about cybersecurity risks as more data moves online.



UK HAS THE HIGHEST DIGITAL PENETRATION IN EUROPE

With a score of 65 in the Digital Engagement Index, the UK tops the European rankings when it comes to current levels of digital penetration. Card payments are significantly more prevalent in the UK than in the other European countries analysed³, while the use of digital platforms for educational purposes is also highest in the UK. Despite the impressive performance in the Digital Engagement Index, a comparatively weak score in the Digital Growth Index means that the UK ranks third in the overall Digital Transformation league table. The presence of digital gatekeepers could inhibit further digital transformation, with 24% of survey respondents stating that they would resist the expansion of digital technologies at work. This highlights that more needs to be done in the UK to receive the buy-in for technological change from a significant minority of the workforce. European Central Bank





THE NETHERLANDS MISSES OUT ON A TOP THREE PLACING

The Netherlands records solid scores in both the Digital Engagement and Digital Growth Indices, which place it in fourth position in the overall Digital Transformation Index. The Dutch use of digital banking platforms is joint-highest among the countries analysed alongside Denmark, while the Netherlands also records the highest score in the use of the internet for health information indicator. The country loses some ground in the digital support indicator, with levels of support for increased digitalisation lower in the Netherlands than in most of the other eight countries, particularly in the sectors of retail and entertainment.



POLAND CLAIMS FIFTH SPOT DESPITE LAGGING DIGITAL PENETRATION

Poland has a score of 48 in the Digital Transformation Index, nestling between the Netherlands and Germany in fifth place in the country rankings. Although Poland has the third-lowest score in the Digital Engagement Index – as a result of a less widespread use of digital platforms than in most European countries, it partially makes up for this in the Digital Growth Index. Support for increased digitalisation is higher in Poland than in any of the other countries analysed. For instance, 85% of Poles surveyed said that they would support increased digitalisation in the energy and utilities sector, while 83% stated that they would be in favour of this in the finance sector. Despite the relatively low level of digital penetration at present in Poland, people value digital technologies more highly than any of the other eight countries. Indeed, 87% of survey respondents agreed that digital technologies made their life easier, compared to a Europe-wide average of 72%.





GERMANY RANKS SIXTH DUE TO CONCERNS ABOUT INCREASED DIGITALISATION

Germany – Europe's largest country both in terms of population and economic output – performs relatively poorly in the Digital Growth Index. The level of support for increased digitalisation is lower in Germany than in any of the other countries analysed, while the country also has the weakest score in the digital readiness indicator. Only 48% of Germans surveyed said that they would be comfortable switching to online banking platforms, while just 37% indicated that they would be comfortable making a payment in excess of £100 with a mobile payment app. This compares to a Europe-wide average of 54%. That being said, Germany has a high score in the digital gatekeepers indicator, with the lowest share of survey respondents stating that they would resist the expansion of digital technologies in their workplace. These results suggest that the main obstacles to the digital transformation will stem from concerns about the use of new technologies in people's personal lives rather than in their professional lives.



FRANCE SCORES LOWEST IN THE DIGITAL GROWTH INDEX

With a score of 45, France ranks in seventh place in the Digital Transformation Index. While France registers strong scores in the e-commerce and digital payments indicators, the Digital Engagement Index score is held back by relatively low levels of engagement with a selection of hardware and software. France has the lowest score in the Digital Growth Index, which is the primary driver of the country's weak position in the overall Digital Transformation rankings. Levels of support for increased digitalisation are lower only in Germany. Meanwhile, the share of respondents in France who would resist the expansion of digital technologies in the workplace is the second highest out of the countries analysed, at 33%.





ROMANIA LEADS EUROPE IN DIGITAL GROWTH POTENTIAL

Romania displays a polarising set of results in the Digital Transformation Index, recording the lowest score in the Digital Engagement sub-Index as well as the highest score in the Digital Growth sub-Index. Romania's level of economic development is lower than that of the other countries analysed. As a result, the provision of digital infrastructure and the public adoption of digital technologies is currently more limited than elsewhere in Europe. Indeed, Romania has the lowest score in seven out of the ten indicators that make up the Digital Engagement Index. However, Romania exhibits more potential for digital growth than any of the other eight countries. Romania's support for increased digitalisation across various sectors is second only to Poland. Crucially, despite comparatively low levels of engagement with digital technologies, Romania scores third in the digital readiness indicator, suggesting that the necessary skills and public backing are in place to drive further digitalisation. These results show that while Romania is currently at a less mature stage of its digital transformation, the country has the potential to close this gap rapidly over the coming years.



TABLE 3 DIGITAL TRANSFORMATION INDEX RANKINGS

	DE	SP	UK	NE	PO	GE	FR	RO	п
COMBINED DIGITAL TRANSFORMATION RANKING	1	2	3	4	5	6	7	8	9
COMBINED DIGITAL TRANSFORMATION INDEX SCORE	58	57	57	54	48	46	45	45	41
DIGITAL Growth Ranking	2	3	6	4	5	7	9	1	8
DIGITAL GROWTH INDEX SCORE	58	56	48	54	51	46	38	61	41
DIGITAL ENGAGEMENT RANKING	2	3	1	4	7	6	5	9	8
DIGITAL ENGAGEMENT INDEX SCORE	58	58	65	55	44	46	52	29	41

As illustrated above, digital technologies have had a pervasive impact on societies and economies throughout Europe, transforming both the goods and services that households consume and the way in which they are produced. The remaining sections of the report use data from a survey of 18,000 individuals across nine European countries to provide original and uniquely detailed insights into levels of penetration of various digital technologies, households' attitudes towards these technologies and their potential for expansion.



DIGITAL TECHNOLOGIES IN 2020

There is a broad European consensus surrounding the general benefits of digital technologies. Indeed, nearly three in four (72%) of those surveyed said that digital technologies make their life easier, compared to just 7% who disagreed with this sentiment. That being said, levels of knowledge and capability surrounding digital technologies vary significantly depending on the technology in question.

FINANCE

Nearly six out of seven (85%) respondents said that they are capable in the online banking space, including 52% that stated they are very capable. For many of the digital technologies that have been analysed, levels of capability are significantly higher among younger survey respondents. This is not the case, however, with online banking. At 86%, the share of respondents who said that they are very capable or mostly capable of using online banking is slightly higher among those aged 35 – 54 than it is among respondents aged 18 – 34.

Levels of confidence with online investment platforms are lower, with less than a third (32%) stating that they are capable with this technology. The results vary significantly between countries. 42% of Italian respondents indicated that they are mostly (23%) or very capable (18%) of using online investment platforms, compared to just 26% of Danish respondents.

OSO CONTROLLING SPACE

Across all sectors, online banking stands out as the digital technology that Europeans engage with most regularly. On average, survey respondents stated that they use online banking more than three times per week, with nearly a quarter (23%) using the technology on an everyday basis. Mobile payment apps are used on average more than twice a week, although 31% of survey respondents use this technology less than once a month. The share of daily users of mobile payments apps is highest in Eastern Europe, with 25% of Poles and 18% of Romanians in the survey stating that they use this technology at least six times per week.



ENERGY AND UTILITIES

Across the sample, the level of confidence in using smart energy meters is low relative to that of other digital technologies. Indeed, less than two fifths (39%) of respondents said that they are very capable (14%) or mostly capable (26%) with this technology. Although the majority (53%) use smart energy meters less than once a month (if at all), nearly one in ten (9%) use the technology on a daily basis. While levels of engagement with most of the digital technologies analysed in this report come down to the personal preferences and economic circumstances of the user, the use of smart energy meters is affected by the policies of energy companies. The results of the survey indicate that the use of this technology is most prevalent in the United Kingdom and the Netherlands, where 15% and 16% use smart energy meters at least six times a week.

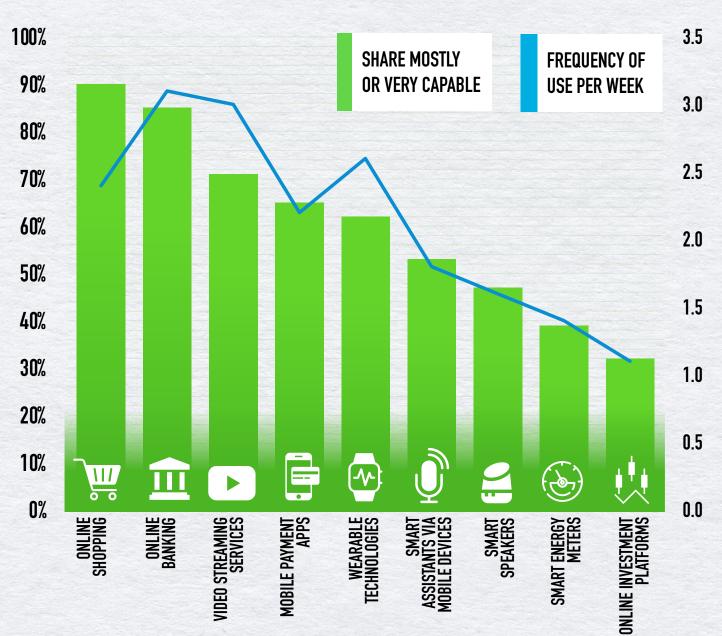
ENTERTAINMENT AND RECREATION

71% of survey respondents are either very capable (41%) or mostly capable (30%) of using video streaming services such as Netflix and Amazon Prime. This means that video streaming services are behind only online shopping and online banking in terms of the confidence that Europeans have in using the technology. Levels of confidence begin to diminish with other forms of digital technology in the entertainment sector. Indeed, the majority of survey respondents indicated that they have at best a limited capability in using smart speakers (53%), while only a small majority (53%) stated that they are capable of using smart assistants via mobile devices. These results highlight the fact that, while competencies with some established digital technologies are well developed, more can be done to increase Europeans' awareness and confidence with a variety of other technologies that have the potential to deliver significant benefits if more widely used, both from a lifestyle and productivity perspective.

Following closely behind online banking in the list of the most frequently used digital technologies are video streaming services. Among the survey respondents, wearable technologies such as smartwatches and headphones are used 2.6 times per week on average while smart assistants and smart speakers are used 1.8 and 1.6 times per week on average, respectively.

There is a strong correlation between the levels of confidence with digital technologies (as presented in Figure 1 and the frequency with which these technologies are used. This points to a potential virtuous cycle whereby increased technological adoption enhances technological capabilities, which in turn promotes even further rates of uptake.

FIGURE 1: SHARE OF INDIVIDUALS THAT ARE VERY CAPABLE OR MOSTLY CAPABLE WITH DIGITAL TECHNOLOGIES AND AVERAGE FREQUENCY OF USE



PTOCO

SUPPORT FOR GROWTH

The results presented above show that a large number of digital technologies have already become deeply embedded within the everyday lives of people throughout Europe. The survey also finds that most Europeans would embrace increased digitalisation in many parts of the economy:



65%

OF RESPONDENTS INDICATED
THAT THEY WOULD BE IN
FAVOUR OF EXPANDING
TECHNOLOGIES SUCH AS
ONLINE BANKING, ONLINE
PAYMENTS AND ONLINE
INVESTMENT PLATFORMS.

FINANCE

There exists a solid base of public support for increases in digitalisation in the finance sector, with nearly two-thirds (65%) of respondents indicating that they would be in favour of expanding technologies such as online banking, online payments and online investment platforms. 83% of survey respondents in Poland are in favour of increased digitalisation in the finance sector, significantly higher than the 53% of German survey respondents that would support greater digitalisation. It is important to note that even in Germany, the country with the lowest level of support for increased digitalisation in the finance sector, only 13% of survey respondents said that they were unsupportive of this, with more than a third (34%) of Germans stating that they are neither supportive nor unsupportive.

HEALTH

Europeans are slightly more wary about the prospect of increasing digitalisation in the health sector (e.g. through the growth of virtual appointments and online bookings), with 52% in favour compared to 22% that are against. The intrinsically intimate nature of healthcare interactions is a likely factor behind the more muted levels of support for increased digitalisation in this space.

Levels of opposition to the expansion of digital technologies in the health sector are highest among those aged 55 and over. More than a quarter (26%) of survey respondents belonging to this age group stated that they were not in favour of increased digitalisation in the health sector. There is also a subtle gender divide in levels of support for increased digitalisation in the health sector. Among male respondents, 53% stated that they were in favour of expanding the use of digital technologies in the health sector compared to 20% that were against this. Among female respondents, support for increased digitalisation is lower at 50% while opposition is higher at 24%.

For many, a key concern relating to the expansion of digital technologies in the health sector is the risk of cybercrime and disruptions to the services and potential loss of sensitive

data that comes with it. This issue came to the fore in Germany in recent weeks, when the country's national institute for disease control was forced to delay the publication of daily coronavirus cases after being targeted by a cyberattack⁴. This event may have influenced the attitudes of German respondents in the survey, with just 39% stating that they would support increased digitalisation in the health sector – the lowest share out of the countries analysed.

ARE IN FAVOUR OF OF INCREASING DIGITALISATION IN THE HEALTH SECTOR

етого

RETAIL

64% of survey respondents stated that they would be supportive of increasing digitalisation in the retail sector through, for instance, the expansion of online shopping. This share includes 23% who said that they would be very supportive of this. Only around one in eight (12%) of respondents indicated that they would not be supportive. Levels of support fell among older age-groups, with only 55% of those aged 55 and over stating that they are in favour of this.

ENERGY AND UTILITIES

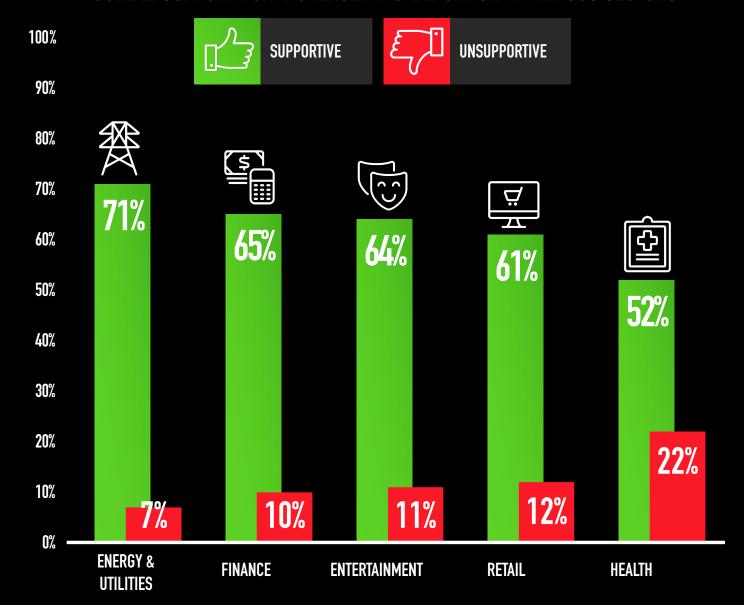
Support for further digitalisation is greater in the energy and utilities sector than in any of the other sectors analysed. 71% of survey respondents stated that they would be in favour of expanding digital technologies in this space, for instance through paying bills online or the deployment of smart energy meters. This is ten times the share that would be unsupportive of increased digitalisation in the energy and utilities sector.

OF SURVEY
RESPONDENTS STATED
THAT THEY WOULD BE IN
FAVOUR OF EXPANDING
DIGITAL TECHNOLOGIES
IN ENERGY AND
SUPPLIES

ENTERTAINMENT AND RECREATION

A majority of Europeans (64%) are in favour of increasing the use of digital technologies in the entertainment sector through, for instance, the use of online streaming services and the attendance of virtual concerts, performances or exhibitions. This is more than five times the share of survey respondents who said that they are unsupportive of increasing digitalisation in this space. Spaniards and Italians are the most supportive, with 76% and 72% of respondents in favour of increased digitalisation in the entertainment sector, respectively.

FIGURE 2: SUPPORT FOR INCREASED DIGITALISATION IN VARIOUS SECTORS





READINESS FOR GROWTH

Digital technologies impact the lives of people throughout Europe. The vast majority of respondents agree that digitalisation has the potential to make their lives easier, and there remains considerable scope for further expansion in the use of these technologies in a number of areas:



FINANCE

The majority (61%) of respondents indicated that they would be happy carrying out their banking and investing activities online, while less than one fifth (17%) said that they would not be comfortable with this. Poland, Spain and the UK are the countries with the highest share of survey respondents who are happy to manage their money online. Meanwhile, Germany has the lowest share, with less than half (48%) indicating that they would be comfortable carrying out banking and investing activities online.

When it comes to mobile payment apps, the majority of Europeans (54%) would be comfortable with making a payment in excess of £100 via a mobile payment app. However, levels of confidence diminish significantly as the value of the transaction increases. Only 37% of survey respondents said that they would be comfortable making a payment in excess of £1,000 via a mobile payment app, compared to 40% who said that they would be uncomfortable. There is an apparent gender divide when it comes to willingness to use mobile payment apps for transactions over £1,000. Among male survey respondents, the share that would be comfortable with this (40%) exceeds the share that would be uncomfortable (35%). Among female survey respondents, the share that would be comfortable making a payment in excess of £1,000 via a mobile payment app (33%) is outweighed by the share that would be uncomfortable (45%).

RETAIL

With online shopping already wellestablished, the majority (65%) of respondents stated that they would be comfortable with carrying out their shopping via the internet rather than in physical stores. Meanwhile, just 12% said that they would not be comfortable with for just 12% of total turnover in 2019 – the second lowest share out of the countries analysed⁵. Interestingly, nearly three quarters (73%) of Italian survey respondents stated that they would be comfortable carrying out their shopping online, which is the second highest share out of the countries analysed. This suggests that there is a public appetite for more online shopping in Italy, despite its relatively low penetration thus far.



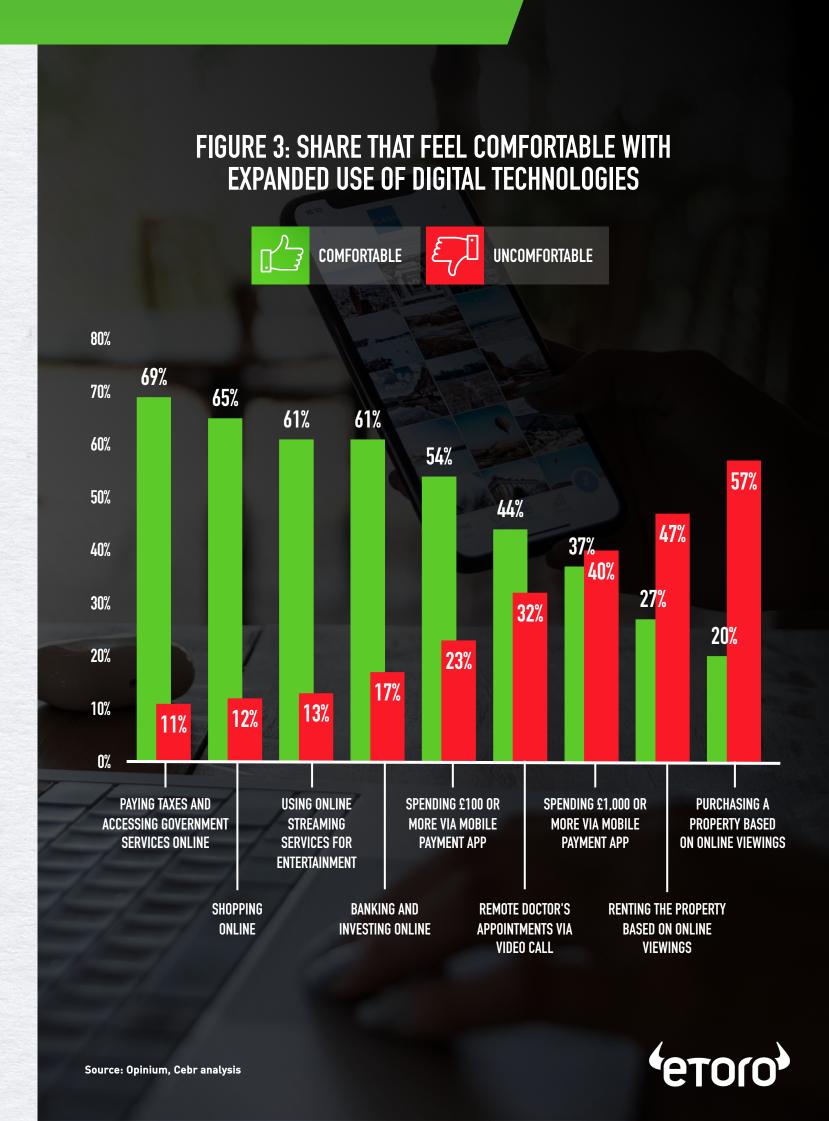
OF RESPONDENTS WOULD FEEL COMFORTABLE CARRYING OUT ROUTINE DOCTOR'S APPOINTMENTS VIA VIDEO CALL RATHER THAN IN PERSON.

HEALTH

The activities described so far are the ones that are already carried out widely via digital platforms. Europeans express greater discomfort when confronted with using digital solutions that are currently less well established. For instance, a minority (44%) of respondents would feel comfortable carrying out routine doctor's appointments via video call rather than in person. Among those aged 55 and above (the age group that interact most frequently with healthcare professionals) just 39% would be comfortable with this shift in the delivery of healthcare services.

REAL ESTATE

Another area where people may be less willing to switch to digital solutions is the real estate sector. Just over a quarter (27%) of survey respondents said that they would be comfortable renting a property based on online or virtual viewings, while only a fifth (20%) would be comfortable purchasing a property based solely on digital viewings. That being said, the widespread lockdowns and restrictions on property viewings that have come into force during the pandemic mean that millions of people have become more accustomed to relying on digital platforms in the real estate sector. The survey results suggest that young people may well drive a continued move towards digital technologies in this area. Indeed, more than a third (34%) of respondents aged 18 – 34 would be comfortable renting a property based on online or virtual viewings, compared to just 18% of respondents aged 55 or over.



DIGITAL CONCERNS

While most Europeans agree that digital technologies make life easier and are generally supportive of increasing digitalisation throughout the economy, there is disagreement on the pace and scale of digital transformation that is appropriate going forward. The survey identifies several diverse and widely held concerns which, if not addressed, could significantly inhibit the further expansion of digital technologies.

CYBERCRIME RISKS

The overwhelming majority of survey respondents (97%) said they had some concerns about the risks of cybercrime as more data and activities are moved online. including more than a quarter (27%) that indicated they are extremely concerned. The share of survey respondents that are extremely concerned about the risks of cybercrime is as high as 35% in Spain and 31% in Romania. The rollout of digital technologies in sectors such as healthcare and education will involve increasingly sensitive information moving online. The results of the survey indicate that these moves will be met with resistance given the deep concerns surrounding cybersecurity.

OF RESPONDENTS ARE EXTREMELY CONCERNED ABOUT THE RISKS OF CYBERCRIME AS MORE DATA AND ACTIVITIES ARE MOVED ONLINE

SPREAD OF FAKE NEWS

96% of Europeans are concerned about the misuse of digital technologies to spread misleading or incorrect news stories. In the past, people's consumption of news was concentrated among a relatively small number of media outlets. Increasingly, however, people are shifting towards social media platforms and alternative media outlets as a source for news. This has placed technology companies and policymakers in an ethical quandary as they seek to balance the often competing goals of freedom of speech and the presentation of accurate information. The survey results suggest that for many Europeans, not enough has been done to address the objective of ensuring the information people receive is accurate. This is particularly the case among older age groups, with more than a third (37%) of respondents aged 55 or over stating that they are extremely concerned about the use of digital technologies to spread fake news. While the potential for misleading news stories to be circulated via digital technologies is a significant concern in all of the countries analysed, these fears are most pronounced in Spain, with 40% of Spanish respondents stating they are extremely concerned about this issue.

OF EUROPEANS ARE CONCERNED ABOUT THE

OF EUROPEANS ARE CONCERNED ABOUT THE MISUSE OF DIGITAL TECHNOLOGIES TO SPREAD MISLEADING OR INCORRECT NEWS STORIES.



DIGITAL GAPS

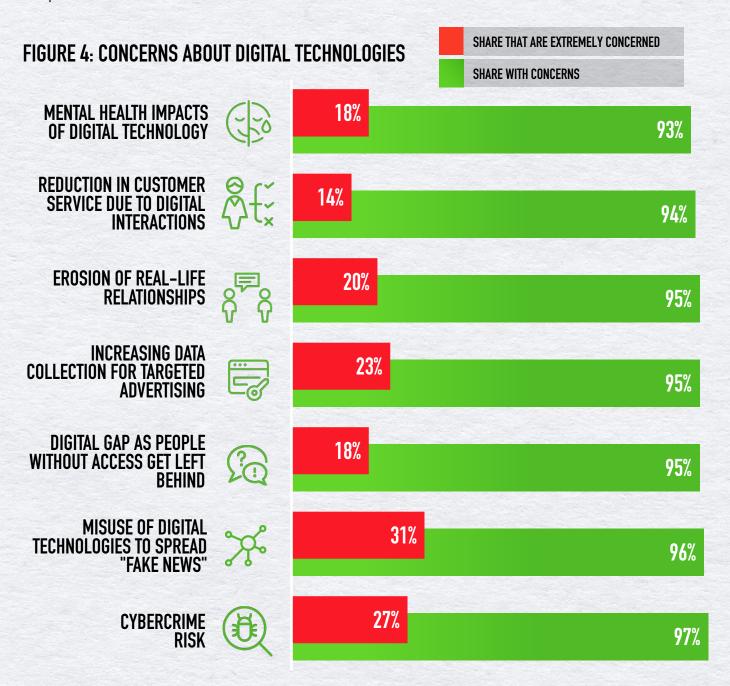
The social implications of digital technology also weigh heavily on the minds of many Europeans. Indeed, 95% are at least a little concerned about a growing 'digital divide' as people without access to digital technologies get left behind. This highlights that encouraging equitable access to digital technology may be key in achieving people's buy in for an expanded use of technology. The potential emergence of a digital divide is a particular worry for survey respondents in Spain and Romania, with 23% indicating that this is extremely concerning to them. By contrast in the Netherlands and Denmark, just 14% of survey respondents said they are extremely concerned about this issue. One example of how the spread of digital technologies could exacerbate existing inequalities is in the educational sector. As learning materials increasingly shift online, access to laptops and software has become integral. Ensuring that these technologies are provided to all children will be key in preventing a gap emerging between those with access to technology and those without.

EROSION OF REAL-LIFE RELATIONSHIPS

One in five (20%) survey respondents said that they are extremely concerned about the recosion of real-life relationships as a result of digital technologies. These concerns are harboured across all age-groups, although they are slightly more widespread among older generations. By contrast, concerns about the impacts of digital technology on mental health are most pronounced among younger generations. Indeed, 19% of survey respondents aged 18-34 said they are extremely concerned about this, compared to 16% among those aged 55 and over. At a country level, Poles are the most worried about the erosion of real-life relationships due to digital technologies, with more than a quarter (28%) of respondents citing this as an extreme concern.

MENTAL HEALTH IMPACTS

Another common concern regarding the spread of digital technologies is the impact on mental health. 93% of survey respondents said that this issue was of some concern to them, including nearly one in five (18%) that said they were extremely concerned. The impacts of digital technologies on mental health is a particular concern for women, with 21% of female survey respondents listing this issue as extremely concerning compared to 14% of male survey respondents.





A result of these concerns is that more than two in five (41%) Europeans feel that digital technologies are spreading too quickly, while nearly the same share (39%) say that the pace of change is overwhelming to them. Breaking these results down by gender suggests that the pace of digital transformation is a greater concern for women than it is for men. Indeed, 44% of female respondents agree that digital technologies are spreading too quickly compared to 38% of male respondents.

A majority (52%) of survey respondents agree that unregulated digital technologies, such as social media platforms, are a threat to society and there is broad support for increased government regulation in this space. Indeed, nearly three quarters (72%) of survey respondents said that governments should be more active in regulating digital technologies. Among Italian survey respondents, 82% agreed that the government should do more to regulate digital technologies – the highest share out of the countries analysed.

On the whole, Europeans have been proactive in addressing their digital concerns. Indeed, only 7% of those with concerns about digital technologies have not taken at least some steps to resolve these. The majority (53%) ensure that their computers, laptops or smartphones are protected with passwords or passcodes, while a similar share (49%) limit their online shopping to well-recognised and established retailers. This finding highlights the difficulties that smaller retailers face in claiming a portion of the growing online market, with lingering security

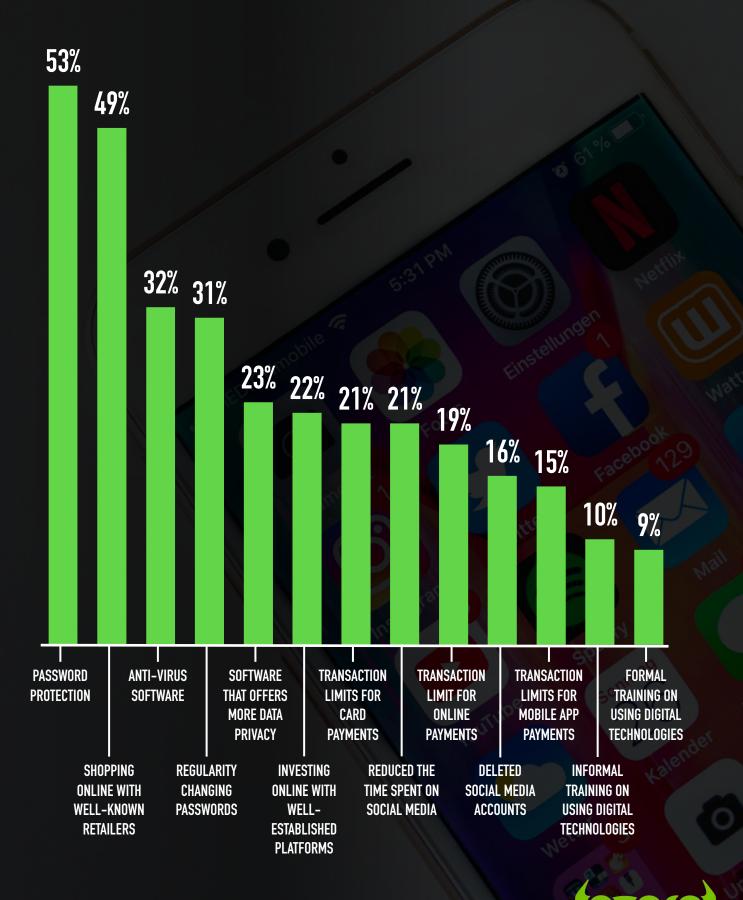
concerns causing many consumers to stick with the larger retailers.

Software is another important piece of the puzzle, with nearly a third (32%) of survey respondents having invested in anti-virus software to address concerns about digital technologies. Meanwhile, 23% seek to use software (e.g. web browsers or email platforms) that offer more data privacy.

Also important are payment transaction limits, which cap the potential losses arising from any security breach. Around one in five (21%) respondents have transaction limits in place for card payments while the share that have these limits for online payments and mobile app payments is 19% and 15%, respectively.

With widespread disquiet about the potential role of digital technologies in distributing fake news, eroding real-life relationships and collecting personal data, many Europeans have taken the step of deleting some or all of their social media accounts. Around one in six (16%) survey respondents said that they have taken this measure as a result of their concerns about digital technologies. Interestingly, younger people are opting out of social media platforms at a faster clip than older generations. One in five (20%) respondents aged 18-34 stated that they have deleted some of their accounts, compared to a share of just 12% among those aged 55 and over.

FIGURE 5: STEPS TAKEN TO ADDRESS DIGITAL CONCERNS



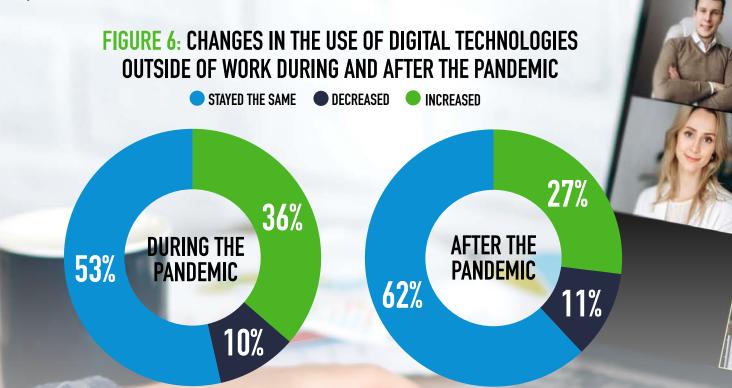
Source: Opinium, Cebr analysis

IMPACT OF COVID-19 ON DIGITAL TRANSFORMATION

The pandemic and the associated lockdown restrictions have delivered economic and societal change on an unprecedented scale. With millions of people confined to their homes and the widespread closure of physical workplaces, shops, restaurants and a variety of other locations, Europeans have faced sudden and dramatic changes to the way in which they go about their lives. More than a third (36%) of survey respondents indicated that their use of digital technologies outside of the workplace has increased since the onset of COVID-19, compared to just one in ten (10%) who said this has decreased. In Spain and Italy, the share of respondents that have increased their use of digital technologies outside of the workplace during the pandemic is 49%. These results reflect the widespread shifts in leisure and recreation that European societies have undergone, with many moving from theatres and cinemas to online streaming services and from high street shopping trips to online retail. The survey results provide fresh evidence that these behavioural shifts have imparted long-term changes in consumers' preferences and habits that are likely to endure even after pandemic. More than a quarter (27%) of those surveyed said that they expected their use of digital technologies outside of the workplace to be higher after the pandemic than it was before. This looks likely to be strongest in Poland, with 37% of Polish respondents expecting their use of digital technologies outside of the workplace to be higher after the pandemic than it was before.

OF SURVEY RESPONDENTS AGED 18 – 34 EXPECTING TO REDUCE THEIR USE OF DIGITAL TECHNOLOGIES AFTER THE PANDEMIC

There are, however, some signs of technological burn-out among Europeans, with 11% indicating that they expect to make less use of digital technologies after the pandemic than they did before. There is significant variation in this result across age groups, with 18% of survey respondents aged 18 – 34 expecting to reduce their use of digital technologies after the pandemic, compared to just 6% of those aged 55 or above. Between countries, the variation is less pronounced: among Polish survey respondents, 9% expect their use of digital technologies outside of the workplace to be lower after the pandemic than it was before, while among Spanish respondents this figure is 14% (the highest out of the countries analysed).



Similar trends have taken place within the workspace. The use of video-calling software has surged in recent months as millions of office workers have switched to remote working as a result of government restrictions and health fears surrounding the COVID-19. This is reflected in the survey, almost a third (30%) of respondents have increased their use of digital technologies at work during the pandemic. This figure varies significantly between countries. Among German respondents, only 19% have increased their use, compared to 42% of Spanish respondents. These results are consistent with the differing severities of the COVID-19 outbreak and the associated restrictions in each country.

Many of the new working habits developed during the pandemic look set to stick, with more than one in five (22%) expecting to make greater use of digital technologies in the workplace after the pandemic than they did before. An important implication of this result is that the frequency of business travel is not likely to return to pre-pandemic levels, even after COVID-19 is brought under control and restrictions are lifted. The associated reductions in commuter flows could have major ramifications for businesses and industries that are reliant on the movement of workers to and from offices, including transport providers, commercial property developers, and city-centre retailers, restaurants and cafes.



The survey explored the specific activities that have seen the greatest shift from physical to digital during the pandemic and the likely longevity of these changes. The results find that the use of online platforms has become more widespread for all of the activities considered. However, there is significant variation in the extent to which people have shifted to online platforms and the degree to which these shifts will endure even after the pandemic:

FINANCE

Even before the onset of the pandemic, the use of digital platforms was widespread for a variety of financial activities. Indeed, nearly four in five (79%) survey respondents used the internet at least some of the time to make an appointment with their bank. Meanwhile, only 12% of survey respondents said that they relied exclusively on physical locations for investing in stocks prior to the pandemic. Given that engagement with digital platforms was already high going into the pandemic, there is less scope for significant changes in behaviour in the finance sector than exists in other sectors where the pre-pandemic use of digital technologies was more limited. That being said, 83% of respondents expect to use the internet at least some of the time to make bank appointments after the pandemic, which is four percentage points higher than the pre-pandemic level.

One in ten (10%) survey respondents said that they have been more active in investing in stocks during the pandemic than they were before.

Meanwhile, a similar share (9%) stated that they have been less active in investing in stocks than they were prior to the pandemic. These results highlight the highly heterogeneous response to the stock market volatility associated with the pandemic. While many retail investors saw the fall in equity prices early on in the pandemic as an opportunity to invest, others were deterred from investing due to the volatility and perceived risks. More than one in seven (15%) of respondents expect that they will be more active in investing in stocks after the pandemic than they were before the pandemic. This suggests that, regardless of how different individuals reacted to the uncertainty and market volatility during COVID-19, the events of 2020 have triggered an increased level of interest in the financial markets among a large number of Europeans. This effect appears to be strongest in Italy, with 20% of survey respondents expecting to be more active in investing in stocks after the pandemic than they were before.

HEALTH Before the pandemic, the majority (54%) of Europeans relied exclusively on physical doctor's appointments. The intense pressures imposed upon health systems by the pandemic as well as the risks associated with making face-to-face visits have led to a major expansion of digital platforms in the healthcare space. Indeed, 70% of respondents that have attended a doctor's appointment during the pandemic have relied at least to OF RESPONDENTS THAT some degree on online platforms. Moreover, 60% expect that they will rely at least partly on digital platforms for HAVE ATTENDED A doctor's appointments in the future. This represents a **DOCTOR'S APPOINTMENT** 31% increase on the pre-pandemic share. In Spain – the country with the highest number of COVID-19 deaths per **DURING THE PANDEMIC** capita as of late November 2020 - a quarter (25%) of HAVE RELIED AT LEAST those who had a doctor's appointment during the TO SOME DEGREE ON pandemic relied exclusively on online platforms. 5% of Spanish respondents expect to rely exclusively on online **ONLINE PLATFORMS** platforms for attending doctor's appointments after the pandemic. Meanwhile in Italy - the country with the second highest COVID-19 per-capita death toll out of those analysed – this share is 6%. The closure of physical gym branches for extended periods in many countries has fuelled an increased demand for online fitness classes. Even before the pandemic, the majority (59%) of survey respondents relied on online fitness classes at least some of the time. During the pandemic, this share surged to 82%, while 68% expect to use online fitness classes to some degree after the pandemic.

RETAIL

The pandemic looks set to drive a smaller long-term increase in the use of digital platforms in the retail sector. Prior to the onset of COVID-19, the majority (56%) of survey respondents did not rely exclusively on physical stores for their grocery shopping. For clothes shopping, this share was 80%. For both grocery and clothes shopping, the use of online shopping has increased significantly during the pandemic as a result of store closures and concerns about the spread of the virus. After the pandemic, 60% of respondents expect not to rely exclusively on physical stores for their grocery shopping, up from 56% before the pandemic. The results suggest that the long-term impact of the pandemic on clothes shopping patterns will be limited. 80% of respondents expect to make at least some use of online platforms for clothes shopping after the pandemic, which is unchanged from the share prior to the pandemic.

ENTERTAINMENT & RECREATION

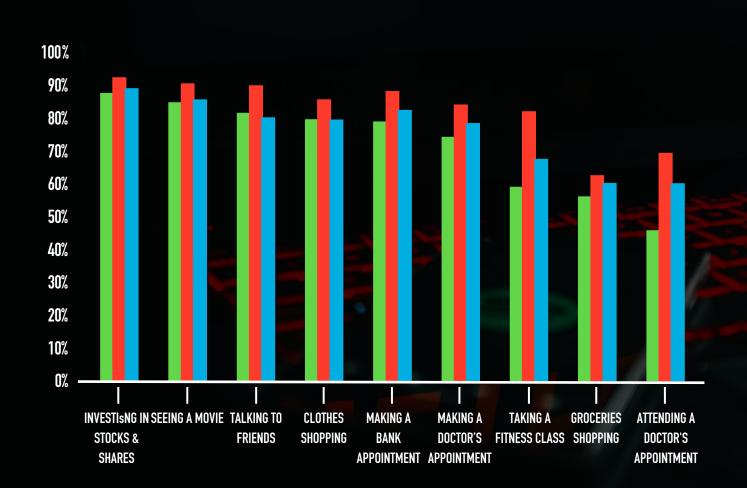
In one area, the experience of the COVID-19 pandemic is likely to push Europeans away from digital technologies. 90% of survey respondents used the internet to talk to friends at times during the pandemic, up from 82% before the pandemic. After the pandemic, 80% of respondents expect to use the internet to talk to friends, 10 percentage points below current levels and also 2 percentage points below pre-pandemic levels. While the projected decline in the use of digital technologies for talking to friends is relatively small when viewed in isolation, it is noteworthy given the expected increases in the use of digital technologies that are expected for most other activities. This suggests that the social separation associated with the pandemic has caused many to value face-to-face interactions all the more.

Among Europeans who have seen their use of digital technologies expand during the coronavirus pandemic, the response has largely been positive. Indeed, 51% said that the increased use of technology has made their life easier, while 46% said the experience had taught them new skills and a third (33%) indicated that it had made them want to try new technologies. The benefits have been particularly pronounced for older generations, with 55% of respondents aged 55 and over stating that the increased use of technology had improved their life. At a country level, the positive reception has been most resounding in Poland, where 65% of survey respondents agreed that the increased use of technology has made their life easier and 61% said that it has taught them new skills.

That being said, the expansion of digital technologies has not been without its drawbacks. Nearly one in five (19%) of those who have expanded their use of technology since the start of the pandemic said that this has made them want to spend less time online in the future. In the Netherlands and Romania, this share is nearly a quarter (23%). However, in other parts of Europe, this effect appears to be less significant. For instance, only 16% of British and French respondents indicated that they want to spend less time online as a result of the pandemic. Meanwhile, only a small share (11%) of survey respondents stated that their increased use of digital technologies during the pandemic has made them want to rely on technology less and just 7% said that the increased use of digital technologies had confused them.

FIGURE 7: SHARE OF RESPONDENTS CARRYING OUT ACTIVITIES ONLINE ATLEAST SOME OF THE TIME







CONCLUSIONS

AGREE THAT DIGITAL TECHNOLOGIES MAKE THEIR LIVES EASIER

Digital technologies impact the lives of people throughout europe. There is a consensus among most europeans regarding the overall benefits of digital technologies, with 72% agreeing that they make their life easier.

There are also encouraging findings with regards to the scope for further digital transformation, with a majority of survey respondents supporting increased digitalisation in the finance, health, retail, energy and entertainment sectors. However, this research highlights that the adoption and growth potential of digital technologies is far from uniform across europe and indeed between different sectors.

On the adoption front, engagement with digital technologies in the UK and Denmark (the highest ranked countries in the Digital Engagement Index) is markedly higher than in Romania and Italy. These discrepancies are driven in part by economic factors, with a lower average spending power in Romania and Poland meaning that people's ability to invest in digital technologies is more constrained. Demographics are another potential factor, as countries with the oldest populations – such as Italy and Germany – generally lag behind other Western European countries when it comes to digital engagement.

In terms of growth potential, a very different picture emerges, with Romania jumping from last place in the Digital Engagement Index to first place in the Digital Growth Index. This shows that there is a strong public appetite and readiness for further digital transformation, signalling that Romania could well close the digital divide with other European countries, conditional on its

businesses and government stepping up to provide the necessary products and infrastructure. At a European level, the majority of survey respondents are supportive of increasing digitalisation across all parts of the economy. The prospect of further digital transformation is most popular in the energy and finance sectors, where 71% and 65% of Europeans are in favour of further digitalisation.

The research also reveals the major role that the pandemic has played in accelerating digital transformation. The closure of physical locations and restrictions on public movement have pushed large numbers of Europeans towards digital solutions this year, in areas ranging from retail and entertainment to finance and health. The survey results show that, for many Europeans, these new behaviours and habits are likely to endure even after the pandemic has faded. This pattern is most evident in the health sector, with the majority of survey respondents now expecting to rely at least to some degree on online doctor's appointments.

Digital technologies will lie at the heart of advances in productivity during the next decade. This means that the success of European economies will be inextricably tied to the effectiveness of their digital transformation. Gaining the support and confidence of the public is a key prerequisite for any digital transformation.

The results of this research show that these factors may well shake-up the European digital hierarchy in the years ahead.



