

Well-being in the Digital Age

Digital technologies expand the boundaries of information available to people and enhance human productivity, but can also imply risks for people's well-being, ranging from job losses and cyber-bullying to breaches to online security and privacy. The report *How's Life in the Digital Age?*, prepared in the context of the OECD-wide Going Digital project, presents evidence on the opportunities and risks associated with the digital transformation based on 33 indicators. It shows that countries that have harnessed the largest benefits from the digital transformation can still be facing large risks. This implies that, through specific interventions, governments may help mitigate the adverse effects of digital technologies while allowing people to reap their benefits. Conversely, inadequate policies or lack of appropriate regulations may leave people exposed to the risks of the digital transformation without reaping its full benefits. The broader Going Digital project also addresses well-being aspects from the policy perspective.

Key recommendations

- Address digital divides to foster inclusiveness and avoid that the digital transformation compounds existing socio-economic inequalities. Governments should provide equal internet access to all and ensure an inclusive use of digital technologies. The labour-market impacts of the digital transformation risk widening existing inequalities. These impacts should be addressed through a comprehensive set of active and passive labour market policies and regulations.
- Empower people with a mixed skillset. The digital transformation requires that workers are equipped with a diverse set of skills. This situation requires governments to strengthen and extend their training programmes. Beyond labour market skills, evolving harmoniously in the digital society requires equipping young adults with new types of emotional and cognitive skills.
- Realise the full potential of digital government and adapt regulatory frameworks to new digital security risks. While a user-driven approach can help governments improving their online services, developing strong, inclusive and interoperable privacy frameworks is also needed. Such frameworks are essential for managing digital security risks as well providing effective protection to online consumers.
- Expand the evidence base needed to assess the well-being impacts of the digital transformation. Harmonised data on many aspects of the digital transformation are currently lacking. This limits research on key impacts, such as the impacts of online networking on people's social lives, the mental health effects of extreme Internet use, or the effects of automation of jobs and earnings. National Statistical Offices, other data collectors, researchers and policy analysts should design and implement new instruments to better capture the well-being impacts of the digital transformation.

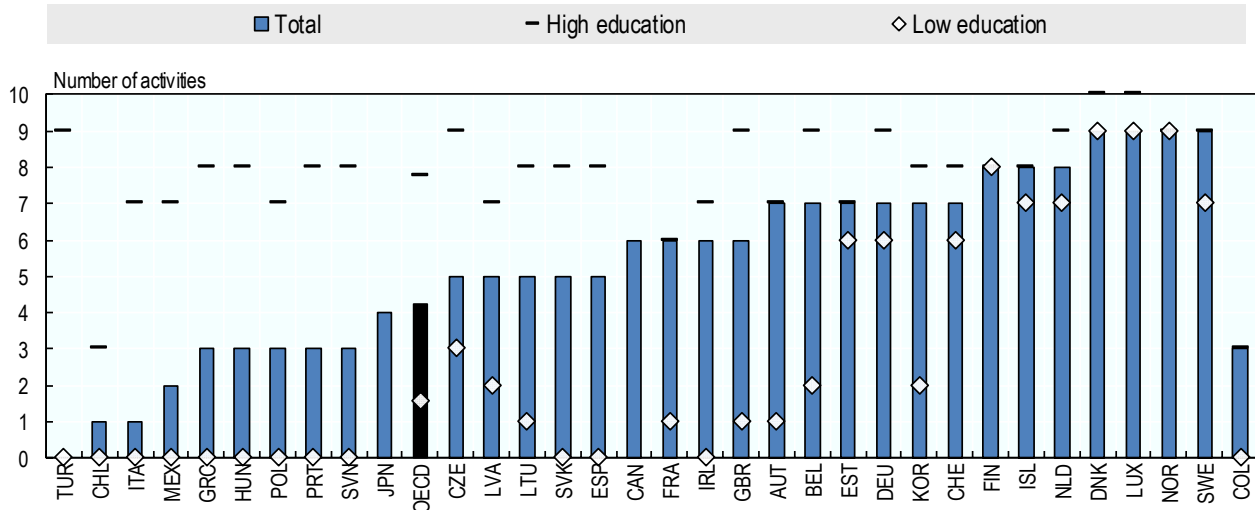
A digital divide remains, which may increase inequalities in well-being outcomes

While more and more people in OECD countries have access to digital technologies, a digital divide persists (Figure 1). Inequalities in access and use of digital technologies by age, gender, education and other socio-economic markers imply that certain groups are better placed than others in harnessing digital technologies for achieving better well-being outcomes in many life dimensions, such as jobs and income, health, work-life balance and social connections. For instance, almost one-third of people aged 55-65 lack computer experience or have failed tests for assessing core information and communication technology (ICT) skills, as compared with 5% among people aged 16-24.

The risks of the digital transformation fall more heavily on people with lower levels of education and skills, and its opportunities may be for the benefit of a few. This is true, in particular, when considering jobs opportunities and earnings levels. While mobile phones have surely improved the living conditions of the world's poor (providing connections to people that had none before), the growth of large digital companies with high capitalisation has also contributed to wealth concentration at the top. In the health field, use of expensive technologies may also contribute to higher inequalities. While the digital transformation offers opportunities to people in terms of attaining higher levels of well-being, it also confronts societies with a risk of higher inequalities in many well-being outcomes.

Figure 1. Differences in Internet use by level of education

Number of online activities used by more than 50% of total population, 2017 or latest year available



Note: See endnote 1.

Source: Based on OECD, *ICT Access and Usage by Households and Individuals* (database), <http://oe.cd/hhind>.

Policies to reduce digital inequalities

Governments should take steps to expand access to Internet in rural and remote places and equip all people with the skills needed to make effective use of digital technologies. Demand for better connectivity and capacity remains strong in all OECD countries, with over 100 million new mobile broadband subscriptions in 2017 and a doubling of data downloaded per subscription. Meeting such demand requires continuous investment in fixed networks, including fibre. At the end of 2017, there were only 7 fibre broadband subscriptions per 100 inhabitants in the OECD. While rural areas are increasingly connected to broadband, much of this access is low quality. In all OECD countries, rural areas lag behind urban and other areas in terms of access to fixed broadband with download speed of at least 30 megabits per second (Mbps), a speed needed to use advanced devices and services. Governments should invest in high-speed fixed networks or incentivise private investment, through competitive tendering, tax exemptions, low-interest loans or lower spectrum fees. Satellite broadband technologies have huge potential to deliver better digital services. Governments should also promote the uptake of more sophisticated online activities; today, more than two-thirds of OECD citizens use the Internet for email purposes, but less than one in ten do so for online courses. In particular, steps should be taken to close the gap in the use of digital technologies between individuals with high and low education for many key online activities such as Internet banking.

Governments should also take measures to reduce digital inequalities in one key area of people's life, namely jobs and earnings. Available estimates suggest that 14% of all jobs are at high risk of being lost due to automation, with another 32% at risk of significant change over the next 10 to 20 years. As labour markets change, labour market policies and programmes will need to promote workers' transitions from declining to expanding jobs; this will require striking a balance between flexibility and mobility, on the one hand, and job stability on the other. To ensure that no one is left behind, governments should take steps to:

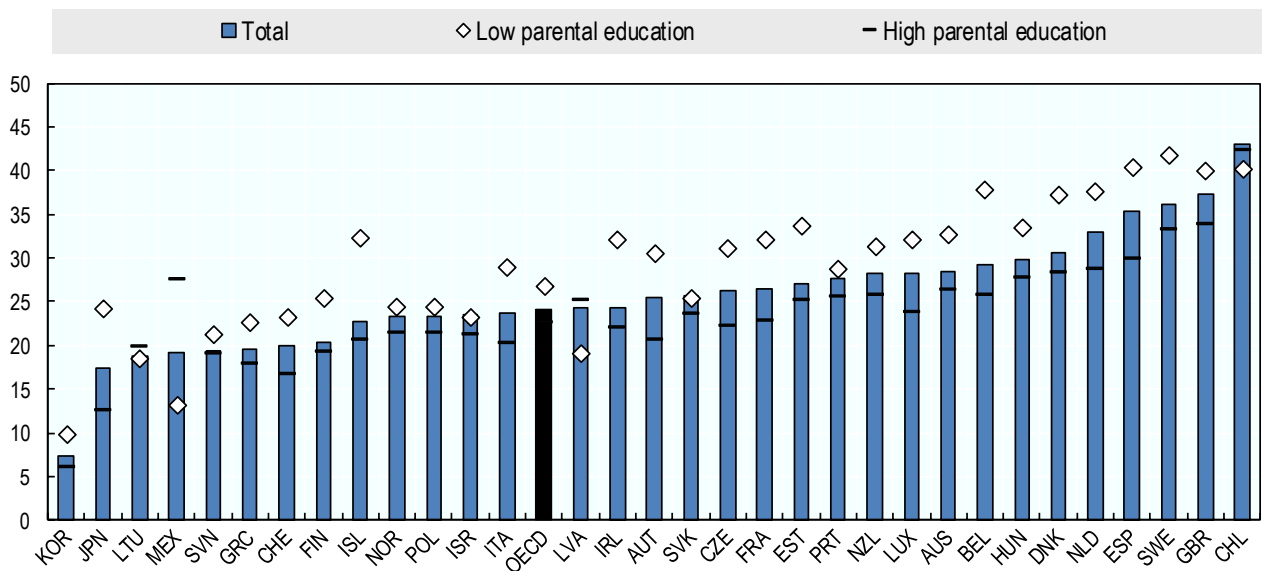
- Strengthen and adapt social protection systems to respond to the needs of the growing numbers of people engaged in non-standard forms of work. Training policies will also need strengthening; average spending on training for the unemployed and workers at risk of involuntary unemployment across OECD countries is only 0.13% of gross domestic product (GDP).
- Leverage active labour market programmes to support displaced workers and design income support schemes to provide income security without unduly undermining work incentives.
- Applying and, where necessary, reviewing and extending labour market regulations, as well as strengthening workers' voice.
- Reduce the risk of substitution between different forms of employment and work by ensuring that labour market regulations, taxes and benefits rules are applied uniformly to all categories of workers and types of jobs.

To benefit from digital technologies people need the right set of skills

People need skills adapted to a digital world. Today only 31% of adults have sufficient problem-solving skills for operating in technology-rich environments. A wide range of skills is needed to succeed in the digital world of work: these include cognitive skills, ICT skills, complementary skills, specialist skills and the ability to cope with change and keep learning, including when out of work.

Emotional and social skills are especially important to fully benefit from digital technologies and safely navigate the online world. This “digital literacy” allows people to combine their digital and real lives, and to avoid mental health problems associated with abuses of digital technologies. The extreme use of the Internet (Figure 2) has been associated with a number of mental health risks such as depression, anxiety, attention deficit, bipolar disorders and addictions especially among children and teenagers.

Figure 2. Extreme Internet use by children based on parental background, 2015



Note: See endnote 2.

Source: Based on OECD (2015), *Programme for International Student Assessment (PISA)* (database), www.oecd.org/pisa/data/.

Policies to support the skills needed in the digital age

Governments face a massive training challenge. With nearly half of the labour force facing a “significant” or “high” risk of experiencing changes in their job tasks due to automation, provision of upskilling and reskilling opportunities is critical. Training opportunities need to be life-long, and incentives need to be provided to firms for training low-skilled workers, only 40% of which currently receive firm-based training. Governments should remove barriers to adult learning, e.g. through policies supporting informed learning choices, new techniques such as distance learning, financing of life-long learning and developing systems of skills validation.

Governments should also review education and training systems to improve the accessibility, quality and equity of education for young people and of training systems for adults throughout their working life.

Finally, foundational skills (e.g. literacy, numeracy) for all should be promoted by improving the recognition of skills acquired after initial education. Digital literacy should also be strengthened in schools, so that risks posed by extreme Internet use are increasingly recognised and prevented.

Digital technologies can improve people’s social and civic lives but also expose them to disinformation and digital security risks

The Internet and the smartphone have fundamentally changed the way people interact with each other. Evidence shows that online social contact typically complements offline interactions rather than replacing it; it may hence help people overcome loneliness and social exclusion. Governments have also used digital technologies to make public services more effective and efficient, and to ease access by users.

On the other hand, digital technologies expose users to significant safety risks such as cyber-bullying and digital security breaches. Digital literacy skills and strong digital security are essential to ensuring that people fully benefit from the digital transformation. Moreover, social media have also exposed people to fake news and disinformation, limiting their exposure to competing viewpoints and contributing to a polarisation of political views. While the causal link from increased disinformation to lower trust in government is not clearly established, people living in countries more exposed to perceived disinformation also report, on average, lower trust in government.

Policies to address the opportunities and risks of digital technologies for people’s social and civic life

A key challenge for governments is to realise their full digital potential. To that end, governments should shift their focus from the simple provision of e-government services to a more holistic and user-driven digital approach, while further improving online public services. Currently, fewer than 60% of all people across the OECD visit or interact with public authorities’ websites. Moreover, governments should ensure a coherent use of digital technologies and data across all parts and levels of government, as well as stimulating public sector innovation and civic engagement.

Furthermore, governments face the challenge of developing strong, inclusive and interoperable privacy frameworks:

- Privacy frameworks enable the free flow of personal data, spurring economic growth and social prosperity. Measures are needed to increase transparency on the purpose and use of personal data collections, and to enhance user access and control over their own personal data. Technological solutions can help increase trust in digital media through “privacy by design”.
- National privacy policies should be supported at the highest levels of government and take a whole-of-society perspective. More than half of privacy measures across OECD countries aim to raise awareness and empower individuals.
- Interoperability of privacy frameworks across jurisdictions is strongly needed, including through national privacy strategies and other practical approaches.

Governments have their say in managing digital security risk. Digital security concerns, including malicious interference, are rising: almost 30% of Internet users avoid providing personal information to online social and professional networks. Digital security needs to be a strategic priority for individuals, firms and governments, not just a technical question. Managing digital security risk online is the responsibility of everyone.

Consumer protection policies are needed to support the convergence of the online and offline worlds. Digital consumers face challenges related to information disclosure, misleading and unfair commercial practices, confirmation and payment, frauds, identity theft, product safety, dispute resolution and redress. Terms and conditions of digital transactions often fail to convey important information to consumers: for example, only 17% of people report reading the terms and conditions of peer platforms such as Airbnb and BlaBlaCar in full. Other approaches are needed to protect consumers online.

How's Life in the Digital Age?

The report uses the OECD well-being framework as a lens to assess the opportunities and risks of the digital transformation for people's well-being. Opportunities and risks arise in every dimension of people's lives, from health, education and work-life balance to jobs and income. The report shows that these impacts are not evenly distributed among countries. Risks may arise as digital technologies become more widely adopted, but evidence shows that some countries are able to leverage the opportunities of the digital transformation while mitigating risks. In other countries, relatively few people benefit from digital technologies as a source for greater well-being, but many are exposed to risks of disinformation, job automation and cyber-bullying, among others. Within countries, too, a digital divide persists. As the use of digital technologies and digital skills are not evenly distributed among age, gender and education groups, some people may be better able to leverage the digital transformation for improved well-being outcomes than others. As leveraging the opportunities of digital technologies can enhance human, social and financial capital, the digital divide may perpetuate existing inequalities.



Finally, the report offers country profiles in the form of “Digital Well-being Wheels”, pinpointing opportunities and risks for well-being in OECD countries. It also highlights current data limitations and makes recommendations to improve the measurement of the impacts of the digital transformation in various areas of well-being in the future.

Source: OECD (2019a), *How's Life in the Digital Age?: Opportunities and Risks of the Digital Transformation for People's Well-being*, <https://doi.org/10.1787/9789264311800-en>.

Notes

- 1.** The variety of uses describes the number of online activities that are taken up by a majority (50%) of the population in each country, out of a list of ten possible activities: e-mailing for private purpose; finding information about goods and services; reading/downloading software; consulting wikis; Internet banking; telephoning/video calling; playing, streaming, downloading, watching games/images/films/music; purchasing online; and visiting or interacting with public authorities websites. Data come from the OECD *ICT Information and Communication Technology* database. Canada, Chile, Colombia and Japan do not have data on two of ten possible activities. Korea and Mexico miss data for one activity. Methodological differences exist for Canada, New Zealand, Japan, Korea and Mexico. The OECD average is population weighted.
- 2.** Households with high parental education are those where at least one of the parents has completed a tertiary degree. Households with low parental education are those where no parent has a tertiary degree, i.e. they all have attained an upper secondary school degree or less. The OECD average is population weighted.

Further reading

OECD (2019a), *How's Life in the Digital Age?: Opportunities and Risks of the Digital Transformation for People's Well-being*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264311800-en>.

OECD (2019b), *Going Digital: Shaping Policies, Improving Lives*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264312012-en>.

OECD (2019c), *Measuring the Digital Transformation: A Roadmap for the Future*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264311992-en>.

OECD (2015), *Programme for International Student Assessment (PISA)* (database), OECD, Paris, www.oecd.org/pisa/data/.

Digital technologies and large-scale data flows are fundamentally changing how people live and work, interact with one another, participate in the economy, and engage with the government. The OECD's **Going Digital** project examines how government policy can help ensure this digital transformation benefits all by increasing growth and improving well-being. Going Digital Policy Notes provide insights into key trends, opportunities and challenges, and the policy directions needed for making the most of digital transformation.

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