

Why develop indicators of well-being in the digital age?

While various aspects of the digital economy are carefully recorded in official statistics, certain key impacts of the digital transformation on human well-being remain poorly understood. This measurement gap is important, especially in the context of a recent push by policy makers and statisticians to produce alternative measures of societal progress. Economic measures are not sufficient to make important policy decisions and broader metrics that reflect people's full life experiences are necessary to evaluate progress (Stiglitz, Sen, and Fitoussi, 2009). Statistics, therefore, need to be adjusted and expanded to ensure they incorporate aspects that matter to people.

In terms of the digital transformation, this means keeping track of the pace of the transformation and the way it impacts businesses, the economy and society as a whole, and also considering the impacts of digital transformation on people themselves. At present, evidence of the impacts of the digital transformation on well-being is still scarce in many areas. For example, relevant data on people's experiences of mental health or social lives are not collected frequently, especially not in a harmonised manner. The OECD Framework for Measuring Well-Being and Progress (<http://www.oecd.org/statistics/measuring-well-being-and-progress.htm>) includes objective and subjective indicators of well-being outcomes covering 11 dimensions. A similar approach can be used to evaluate how the digital transformation affects these well-being outcomes.

Survey vehicles are an important source of both self-reported objective and subjective data, and can provide insights into a variety of well-being dimensions in the context of the digital transformation. These include job satisfaction, teleworking, digital addiction, self-reported victimisation (e.g. cyber-bullying and experiences of online harassment) and subjective well-being. Data from surveys can be used to build indicators of people's life experiences in the context of the digital transformation, as well as to attempt to establish causal relationships between the rise of emerging technologies and various well-being outcomes, provided that the appropriate data are available.

What are the challenges?

Currently, official data for many self-reported indicators are lacking or their relevance to the digital transformation is limited due to the unavailability of appropriate covariates. Many household or other surveys that include variables on subjective well-being and other measures of domain-specific satisfaction do not feature detailed variables on the frequency of use of personal digital devices, and often do not distinguish between devices (e.g. computers, mobile phones and tablets). This impedes the monitoring of people's subjective well-being in the context of digital advances. Equally, surveys on ICT access and usage do not include questions on life evaluations or evaluations of people's emotional state (referred to as "affect"), even though these may be of particular relevance for studying the well-being impacts of digital technologies.

In addition, as digital technology use becomes ubiquitous it no longer suffices to collect binary data on people's technology use. Rather, understanding the impact of digital technologies on people's lives requires measuring the intensity and frequency of their use, both in terms of time spent online and variety of activities. Few internationally comparable official surveys include detailed variables on time spent online or time spent using digital devices, especially combined with well-being outcome variables.

The causal impacts of the use of digital technologies on people's mental and physical health, social connections and their evaluations of their own lives remain inconclusive. Larger studies rely on primarily correlational data, whereas more experimental studies are rarely comparable across countries and feature small sample sizes. The inclusion of sets of questions on digital technology use and self-reported life evaluations and affect in large panel studies, such as is the case with the British Household Panel Survey (BHPS), can provide more insights into how the digital transformation affects people's self-reported life experiences.

Options for international action

One important goal from the perspective of conducting cross-country comparisons is ensuring harmonisation of survey vehicles across countries. The OECD Model Survey on ICT Access and Usage by Households and Individuals encourages the alignment of Internet-use related measures across OECD countries. While it has been partially adopted in a number of OECD countries, adoption still varies widely, particularly outside the European Statistical System. Moreover, because digital technology use trends change so quickly, it is important that data are collected regularly to ensure comparability across countries.

One way to shed more light on the potential impacts of technology use is to include well-being outcome variables and questions on ICT use intensity in the same survey vehicle. As an example, the 2018 Canadian Internet Use Survey collected information on whether individuals have consciously "taken a break" from the Internet because they felt their usage was too high. The OECD model survey on Internet Use by Households and Individuals will be revised as part of

