
Going Digital Summit - Issues Note

Session 4A: Monitoring the Digital Transformation and its Impacts.

A Measurement Agenda for the future

Policy making needs to be grounded in data and indicators, as this enables evidence-based decision making. But this is difficult for policies in the digital age, as many existing metrics and measurement tools are challenged by the fast pace of change of the digital transformation. The international statistical community has achieved some progress and more is in the pipeline, yet more needs to be done to strengthen the evidence needed for shaping and monitoring the digital transformation.

Often policy makers ask “how big is the digital economy”, or, more recently, “how big is the *sharing economy*, or the *platform economy*, or the *gig economy*”. They also ask about the impacts of digital transformation on jobs, productivity or well-being. The scope and speed of the digital transformation differs, across countries, sectors, organisations, places, and segments of society. As the digital transformation diffuses in every sector of the economy and affects every aspect of our society it will be increasingly more challenging to measure its distinct “size” or measure every impact. However, looking through the lenses of those sectors, workers, and citizens who are most affected by these changes today, it is possible to reveal important features, dynamics, and impacts of the digital transformation, which can help shape policies for tomorrow.

For example, the OECD has developed a taxonomy of digital-intensive sectors. The taxonomy was then used to look at the characteristics of those sectors in comparison to the rest of the economy, such as the extent of job creation, the types of skills they utilise, the extent of concentration (estimates of mark-ups), trends in business dynamism, etc. Likewise, the discussion often focuses on ICT skills, which have typically been viewed through the lens of specific occupations (e.g. ICT specialists). New analysis, based on the OECD PIAAC survey of workers competencies shows that most occupations have some degree of ICT-task intensity. Shifting the discourse from occupations to tasks workers do on the job, allows statistics and policies to consider a broader set of the population impacted by the digital transformation and their skills needs (see Figure 1).

Much information needed to respond to key questions on the digital transformation already exists or is being developed, but some aspects are still not well covered and there is a recognition that statistical information systems need to adapt, and in some cases expand, to capitalise on their ability to provide robust and representative information while offering more granular insights. Efforts to exploit official statistics at the micro level (enterprise/establishment/organisation, worker, household/individual) in an internationally coordinated fashion, including the use of administrative data, should be supported, especially with respect to data-linking opportunities. This will mean continuing to encourage the development of tools and mechanisms to access micro-data while ensuring data confidentiality.

In the shorter term, the challenge is to improve the international comparability of our current indicators and make statistical systems more flexible and responsive to the introduction of new and rapidly evolving concepts driven by the digital transformation.

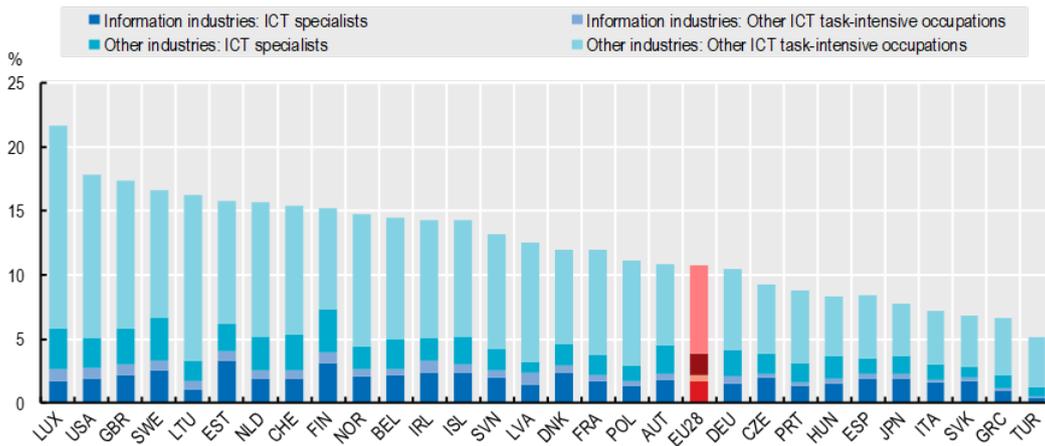
There is also a need for complementary information systems to emerge - data infrastructures that are capable of tracking the emergence of new activities and monitoring the extent to which they are replacing traditional ones, whenever and wherever they occur. Data infrastructures that can adapt to newly emerging digital footprints, i.e. the enormous flows of information digital technologies and digitally-enabled activities, e.g. e-commerce, cloud services, and Internet of Things, are generating. New measurement

approaches are needed and digital tools and footprints generated by digital activities can themselves be part of the solution.

In the longer term, the challenge is to design new and interdisciplinary approaches to data collection and leverage the information captured by digital systems.

Figure 1. Beyond ICT specialists: workers in ICT task-intensive occupations, 2017

Employment in ICT specialist and ICT task-intensive occupations within and outside information industries, as a percentage of total employment



Source: OECD (2019), *Measuring the digital transformation*.

The OECD's *Going Digital* project proposes nine actions to advance the measurement agenda on monitoring the digital transformation and its impacts. The first four overarching actions are directed towards building the next generation of data and indicators capable of dealing with the challenges of the digital transformation: **1.** make the digital transformation visible in economic statistics; **2.** get the narrative on impacts right; **3.** measure wellbeing in the digital age; **4.** design new approaches to data collection. Five further actions are targeted to specific areas identified as requiring attention: **5.** monitor transformative technologies (notably IoT, AI, Blockchain); **6.** make sense of data and data flows; **7.** define and measure the skills needed in the digital era; **8.** measure trust in online environments; **9.** assess governments' digital strengths.

Q1: What are the top priorities for internationally comparable measurement of the digital transformation? What major gaps or questions require an answer?

Q2: What "low hanging fruits" should be targeted?

Q3: Consider the emergence of new data sources, data gathering and analysis tools such as web scraping, natural language processing of unstructured data, and online surveys. What new types of evidence will be derived from these sources?

Q4: How can the OECD help in addressing these challenges?