

Assessment of the Current State of Data Innovation



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News

On 2 February 2022, the Joint Research Centre (J.R.C.), the European Commission's science and knowledge service, published its [Science for Policy report on Data Innovation in Demography, Migration and Human Mobility](#). This report is not intended to present a policy position of the European Commission but rather to present the evidence-based output that scientifically supports the European policy-making process in the areas of demography, migration, and human mobility.

The report acknowledged that, although the availability of data has become central to policymakers when making informed policy decisions, data innovation has also led to new challenges with regard to ethics, privacy, data governance models, and data quality. The purpose of the report was to assess the current state of data innovation in the scientific literature.

The report highlighted three main findings:

- *Advantages of using innovative data*: Innovative data is composed of data derived from an individual's digital footprint, from sensor-enabled objects, and/or can be inferred using algorithms. The study found that, in comparison to traditional data, innovative data have a greater geographic and temporal granularity, (near-)real time availability, and allow extensive coverage, which makes more immediate international comparisons possible. After reviewing the scientific literature, the report concluded that mixed methodologies were increasingly being used, namely integrating traditional data with innovative data in order to study demographic and migration phenomena. The report also showed that there is a discrepancy with regard to the definitions of population, migration, and human mobility between the studies that were based on innovative data and those studies adopted for official statistics;
- *Greatest potential of data innovation*: The study showed that data innovation was best used in the domains of "situational awareness, nowcasting and response" and of "prediction and forecasting," as it has the potential to provide (almost) real-time, accurate, and detailed information on demographic trends and/or public opinions;
- *Facilitation of data innovation transition*: In order to fully unleash the potential of non-traditional data, there needs to be a transition from a phase of exploratory use of innovative data to a phase of systematic use of innovative data for official statistics and policy-making. The report stressed that legislation is undoubtedly a *sine qua non* condition of data innovation transition. Legislation has different roles to play in this transition: It should regulate the access to data held by the private sector in a way that guarantees the individual's fundamental rights and the interests of the private sector. It should also explore how to allow national statistical offices to collect, analyse, and publish data from non-traditional data sources. Alongside a favourable regulatory framework for data innovation trans-

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ition, more investments need to be made that are aimed at fostering collaboration between data owners and the private and public research sectors.

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