

Global Forum on the Knowledge Economy -- Data-Driven Innovation for a Resilient Society

October 2-3 2014

Highlights

1. On the occasion of the 2014 OECD Ministerial Council Meeting, under the Chairmanship of Japan on the 50th anniversary of its accession to the OECD, Ministers affirmed the importance of knowledge-based capital to provide new sources of growth in the face of long-term challenges, such as aging and environmental degradation, and that the OECD's work on the digital economy is important.
2. The 4th Global Forum on the Knowledge Economy (GFKE) held in Tokyo, Japan, on 2-3 October 2014, focused on data, one example of knowledge-based capital. Policy makers, business, civil society and other stakeholders from OECD Member and Partner (i.e. non-member) economies participated in active discussions on data-driven innovation for a resilient society.
3. Throughout the entire forum, participants acknowledged of high value of big data in spurring economic growth or solving various social challenges, and discussed policy options to promote the use of big data, that will inform the discussion at future OECD meetings. Highlights of the discussions include:

(1) Illustrating the economic benefits

Participants discussed the positive economic impacts of big data across industries, and in particular manufacturing, and emphasized that data-driven innovation, is likely to promote economic growth both in OECD member and non-member economies, directly or through spill-over effects. Participants mentioned the value of optimization of existing services and of analytics for decision-making. Participants discussed the global dimensions of data-driven innovation, including the importance of cross-border data flows for trade, as well as the need to understand and address the implications of data-driven innovation on jobs.

(2) Addressing complex societal challenges

Participants recognized the potential of big data analysis for disaster response (for example, based on the ex-post analysis of the Great East Japan Earthquake), but also more generally for improving quality of life. They underlined the need for government leadership, awareness, and collaboration among all actors in the adoption and implementation of disaster risk management approaches to enhance human security. As an example, it was shown how big data can be used to relieve traffic congestion and improve construction standards.

(3) Leveraging data driven innovation in aging societies

Participants recognized the opportunities of data-driven innovation for ageing societies, but agreed that most of the potential for value creation is still unclaimed. They discussed the need to overcome data silos and create the appropriate conditions for broader data access, linkage and integration. It was recognized that local data on vulnerable elderly populations is necessary for central government actions and disaster planning. Defining minimum standards for data was considered essential, as well as interoperability. An important idea put forward was the need to create conditions for a risk-based approach to protecting data. Finally, participants concluded that there is a need to strengthen data analytical capacity, build expertise and increase the business opportunities.

(4) Promoting skills for the data-driven economy

Participants were aware of the gap between the demand and supply of data scientists, and the need for skills development and education. Potential displacement effects were highlighted in particular in regards to certain middle income, white collar jobs as well as the need to address the resulting inequality implications. Problem solving and entrepreneurial competences building on human creativity and intuition, in combination with data analysis and software engineering skills, were highlighted as critical as well as basic ICT literacy. Participants recognized the importance of life long learning as a means to fill the potential employment gap.

(5) Building trust in the data-driven economy

Participants recognized that trust of individuals is crucial and that big data should respect fundamental values. They underlined the importance of risk-based approaches to the collection and use of personal data. Algorithmic transparency raises complex issues, but providing information on key elements informing decisions is important to avoid discrimination. Other key issues discussed included security, ethics, privacy enhancing technologies and better metrics. The impact of data concentration on privacy, but also on competition, transparency and accountability was considered worthy of further examination.

(6) Encouraging open data across society

Participants underlined the necessity of promoting open data to make it possible to use public data for the creation of new services and effective administrative procedures. Public value depends on data use. In response, governments' role is evolving from the direct provision of data and regulation. It also now encompasses the creation of enabling conditions (communities of providers and users, building trust, enforcing principles of non-discrimination) for public entities, civil society, and the private sector to improve open data sharing and use.

(7) Policy conclusions

Governments and stakeholders need to develop a coherent policy approach to harness the economic benefits of data driven innovation. They need to assess the context for data collection, analysis and use to ensure that data-driven innovation serves societal values in an ethical and equitable manner.
