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Three research questions for big and open data
Blog Editor

On the 1st and 2nd of July 2013, the LSE hosted the second New Economic Models in the Digital Economy (NEMODE) Community Meeting. In this post, LSE Tech fellow **Carla Bonina** *shares the three research questions that emerged as part of the big and open data group: the value of open data, the labour market needs for profiting for big data and the ethical implications from experiments using big data.*

During the first days of July, we welcomed the second NEMODE+ community meeting at the LSE. NEMODE+ is a network initiative funded under the Research Councils UK Digital Economy research programme that brings together academics and practitioners to explore new economic models in the digital economy. During the first day, we heard insightful updates on projects that have already been funded by the NEMODE+ network. Day one also covered the overview of eight new projects that have been funded as part of NeMinDE, a sister initiative under the RCUK Digital Economy programme.

Day two was a hands-on project. One of the objectives of NEMODE+ is to stimulate new ideas, propose areas of research and policy engagement around the opportunities and challenges that digital technologies bring to the UK economy and society. Therefore, part of the activities of day two included working in groups around six areas of interest proposed by the delegates in advanced. I took part in the sub-group clustered around big and open data, along with four colleagues from other institutions. As a result of the brainstorming exercise, we arrived at three main research questions that were later presented to the whole community. I share these as follows with a brief explanation of the sub-set of questions or issues to address.

- Research Question #1: What is the value to the UK of open data?

Under this question, we agreed that at least two themes need further research development: one is the need to broaden our vision on value constellations and social benefits. In other words, we need to look at the economic, social, political and environmental dimensions of value creation from the use of open data. The other theme that needs investigation is the critical aspects of open data: understanding the tensions, issues and challenges that emerge for the nation, organisations and citizens (i.e. privacy, surveillance, discrimination).

- Research Question #2: What skills and capabilities do UK organisations need to create value from 'big data'?

We discussed many topics emerging from big data. Our consensus was that in order to create economic and productivity value for UK firms, a review on the skills, education policies and specific training is needed. New skills include all stages of big data management (i.e. data collection, data analysis, using big data for business operations, using big data in strategic decision-making), and we need a better understanding of what is out there in terms of job qualifications, what is needed and what is missing.

- Research Question #3: What are the opportunities and ethical challenges for randomised controlled experiments (RCTs) around 'big data'?

One of the potentials of big (and open) data relies on business intelligence. We suggested that public and private sector organisations will make greater use of big data to run RCTs to test business and public sector offerings. We also agreed that, while these experiments may be a powerful way of getting evidence about what it works, they also raise ethical concerns. We therefore proposed to look more carefully at the design of the RCT itself, and also the implications on how RCT data is used to guide business and policy decisions.

Overall, the two day event was insightful and inspiring. You can access the overview of the meeting and the questions of the other groups in the interactive EPSRC website, that is part of the EPSRC Information and Communications Technology project. Also, check the highlights and conversations that we shared on twitter during the two-day event.
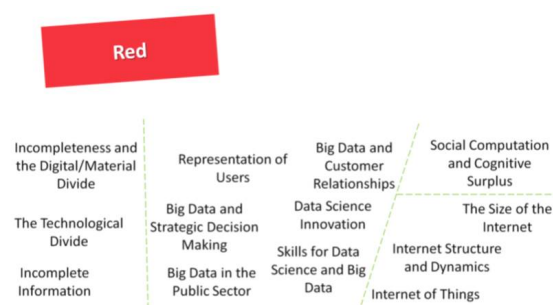
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About the author

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