A Research Roadmap to Advance Data Collaboratives Practice as a Novel Research Direction

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ABSTRACT

An increasing number of initiatives have emerged around the world to help facilitate data sharing and collaborations to leverage different sources of data to address societal problems. They are called “data collaboratives”. Data collaboratives are seen as a novel way to match real life problems with relevant expertise and data from across the sectors. Despite its significance and growing experimentation by practitioners, there has been limited research in this field. In this article, the authors report on the outcomes of a panel discussing critical issues facing data collaboratives and develop a research and development agenda. The panel included participants from the government, academics, and practitioners and was held in June 2017 during the 18th International Conference on Digital Government Research at City University of New York (Staten Island, New York, USA). The article begins by discussing the concept of data collaboratives. Then the authors formulate research questions and topics for the research roadmap based on the panel discussions. The research roadmap poses questions across nine different topics: conceptualizing data collaboratives, value of data, matching data to problems, impact analysis, incentives, capabilities, governance, data management, and interoperability. Finally, the authors discuss how digital government research can contribute to answering some of the identified research questions.

KEYWORDS

Data Collaborative, Data Philanthropy, Data Sharing, Digital Government, Evidence Based Policy, Public Private Partnership

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1. INTRODUCTION

The world’s most complex and ‘wicked’ socioeconomic problems - from climate change to the spread of epidemics - cannot be tackled by a single authority in the public sector alone. It takes a village to understand and unpack these complex problems in order to make them understandable and actionable. Data can help, especially considering its exponential growth in the past few years. Access to new datasets and expertise can help provide a more accurate and comprehensive picture of the situation and empower decision-makers to tailor their interventions accordingly. However, much of the most relevant data that can help untangle these complex problems (and the expertise required to make sense of that data) often reside with corporations in the form of web clicks, like buttons, cell phone data, satellite data, etc. As a result, an increasing number of initiatives have emerged around the world to help facilitate data sharing and collaborations to leverage different sources of data to address societal problems. They are called data collaboratives (Verhulst and Sangokoya, 2015) and can be defined as “cross-sector (and public/private) collaboration initiatives aimed at data collection, sharing, or processing for the purpose of addressing a societal challenge” (Susha, Janssen, & Verhulst, 2017, p. 2691).

Data collaboratives is a novel research topic which expands the horizons of new approaches of tackling public problems and improving public services through data science and collaborative solutions. There is growing experimentation with data collaboratives (as mapped by The GovLab at datacollaboratives.org), however there is a lack of common terminology and shared understanding of the novelty and complexity of this new phenomenon. Therefore, we have convened a panel that brought together researchers and practitioners working on data collaboratives to showcase their results and discuss critical issues with the digital government community. The panel was held during the 18th International Conference on Digital Government Research on 8 June 2017 at City University of New York (Staten Island, New York, USA). It featured five speakers: a government official, two practitioners, and two academics (all co-authors of this paper). The panel was moderated by the first author of the paper. In this paper, we report on the outcomes of this panel with the aim of identifying a research agenda to help build bridges between research and practice in this area.

2. DATA COLLABORATIVES AS A NOVEL RESEARCH DIRECTION

Digital government fosters the use of information and technology to support and improve public policies and government operations, engage citizens, and provide comprehensive and timely government services. The global digital government research community is interested in the development and impact of digital government. The community exists at the intersection of computer and information science, social and behavioral science, and focuses on the needs and problems of government. Building new knowledge about data collaboratives as a complex phenomenon is in line with the interests of this community.

There has been a lot of work done in the field of data sharing in the digital government community (e.g. Landsberger & Wolken, 2002; Gil-Garcia & Pardo, 2005) and only recently the focus has shifted towards the inclusion of private parties (Bharosa, et al, 2013). The same is true for work related to information sharing and collaboration among government organizations. Tung-Mou and Maxwell (2010, p.73) reviewed literature for factors affecting information sharing, which include promotion of a culture of information stewardship as opposed to ownership; strong leadership support to information sharing efforts; legislative and regulatory mandates; reward systems that promote information sharing both within and across organizations; the establishment of shared goals; and the development of ongoing trusted relationships based on mutual understanding of needs and concerns and shared responsibility. Gil-Garcia, Chun, and Janssen (2009) discussed the challenges to government information sharing and integration and grouped them in technical, organizational, political, and legal categories. Data collaboratives introduce new complexities to these collaborative engagements, with
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