Discussing the Twofold Role of Government – Provider and User –in the Open Government Data Ecosystem

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Discussing the Twofold Role of Government - Provider and User - in the Open Government Data Ecosystem

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Abstract: This research aims to discuss the role of government in the open government data (OGD) ecosystem as either provider or user. Data collection was performed through a systematic literature review on ninety-four papers and a case study. Interviews, document analysis, and observation were used to study the case of the Government Agency for Law Enforcement and Prosecution of Crimes of one of the Brazilian states. The systematic literature review demonstrated that the use of OGD for government is incipient and, the self motivation of public employees can improve the OGD use.

Keywords: Open Data, Open Government data, Open Data Users, Public Organizations, Brazilian Government.

1. Introduction

Open Government Data (OGD) ecosystem enables the use of data to a broad range of potential users, which includes the government and all stakeholders (Ding et al., 2011). Policy makers, specialists, independent developers, service providers, academics, private organizations, as well as citizens have a potential interest in OGD (Erickson et al., 2013). The motivations to the use of open government data have been attracting less attention than those of providing them. This phenomenon becomes more pronounced when approaching the use of OGD by the government and public organizations, even if the audience of OGD includes government employees (Smith & Sandberg, 2018; Davies, 2010).

Studies have demonstrated that the main interested subjects in OGD are professionals and citizens (Heise & Naumann, 2012), focusing respectively on the development of innovation based on OGD and its transparency and accountability. However, the use of OGD by the public sector is not enough discussed in the literature. OGD are open to both public and private sectors (Jetzek,

Avital e Bjorn-Andersen, 2014). Consequently, it makes sense that public organizations also use OGD (from other OGD public providers) in decision-making and innovation, as well as that the literature covers this topic. Considering the discussed aspects, this research-in-progress aims to discuss the role of government in the open government data ecosystem (provider or user).

The systematic literature review was carried out as a way to identify what has been researched on government as an OGD user. The case study was performed at the Government Agency for Law Enforcement and Prosecution of Crimes of one of the Brazilian states. Five key-informants were interviewed in February 2019. Document analysis was also used as a way to understand the data used as a source for some data in reports. Preliminary data were analyzed through categorial content analysis.

2. Results

The research about the use of open data by governments is incipient (Smith & Sandberg, 2018), and only recently, in 2017, an investigation on public sector was found - Zhu (2017) analysed the case of a justice department, with jurisprudence and other legal documents in the USA. Two other recent studies investigated the use of OGD in the smart cities context (Pereira et al. 2017, p. 8) and found practical implications for use of OGD in smart cities: "Technology has dramatically altered the way government and citizens relate; help in daily activities; and increase transparency, participation, and collaboration." Vieira and Alvaro (2018) developed an experimental platform using OGD to gain productivity for development of solutions for smart cities. An inquiry therefore emerges in regard to future studies: is public employee motivation or training the critical factors to the use of OGD by the government? To contribute to this discussion, a preliminary data of the case study is presented in this section.

An in-progress case study is reported, illustrating the use of OGD by a governmental agency in Brazil (justice prosecutor). Key-informants were interviewed in February of 2019 to preliminarily understand how that governmental agency uses open data. The internal office that performs activities related to data analysis to support strategies and projects for the Government Agency for Law Enforcement and Prosecution of Crimes, based on the full knowledge of the institution, noted the need for more people within the organization to have at least the basics theoretical and practical knowledge of the use of open data. This finding was based on two different circumstances. The first one is the movement on private sector in investing significantly in data analysis and data science of internal or open data, aiming the generating economic value. The second is that the Agency did not always have sufficient data to decide what prosecution processes should be opened, or even data supporting the operations during a prosecution.

The preliminary result of the case study identifies the strategic use of OGD by a public institution and evidences the use of data to qualify management and to pay attention to social problems. In part, the studies of Gascó-Hernández et al. (2018) and Graves & Hendler (2014) corroborate these results. Technical knowledge, the motivation of public employees and their abilities to transform open data in useful information were discussed during in the interviews. Decision-making process and public service modeling, as cited by Gascó-Hernández et al. (2018), were the targets of the

projects developed by the interviewees. Other aspects demonstrated were the use of OGD without specific training, a bottom-up initiative to use OGD, and the existence of data analysis sector. That aspect involves issues to be investigated in many contexts in order for a new direction to theory and practice in the use of OGD to emerge.

3. Final Remarks

This research demonstrates the role of government in the literature about the open government data ecosystem as a provider, and rarely has the literature analyzed government as a user of OGD. It is not clear why the investigations contemplate less the government as a user of OGD. The explanation from the literature is not complete, because the literature does not converge. The literature recognizes the possibility of government as a user of OGD, but nevertheless most empirical investigations do not study the role of government as a user of OGD.

This preliminary research founded a case in Brazil that evidenced the use of OGD without training and initiated from self-motivated public employees. Contributing to this evidence are the scarce empirical investigations, which do not rebound the possibility of the existence of several similar cases around the globe. The main suggestion for further studies is to broad the view about the use of OGD, contemplating public organizations. It will be observed for the origins of initiatives, the actors involved, type of actions or projects, and the challenge of measuring the social and internal impacts of actions. Other case studies might be developed aspects such as sociocultural aspects of the use of open data need to be approached, addressing issues related to social and cultural barriers that prevent the use of data by governments.

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