DEATH OF "OPEN DATA"? HOW OPEN DATA HAS BEEN REALISING AND/OR NOT REALISING OPEN GOVERNMENT

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Abstract
Open government is a concept of governance, which holds that citizens have the right to access the documents and proceedings of the government to allow for effective public oversight. Some definitions specify the distinction between Open Data and Open Government: Open Government is defined in terms of service delivery and public accountability; and technology can be used to facilitate disclosure of information, but that the use of open data technologies does not necessarily equate accountability.

The paper analyses the relationship between Open Data and Open Government through a case study and tries to understand how the former affected the latter and the role of digital technology. The case is the open data policies and strategies of UK government, especially its application in sports and health related policies in recent years. The preliminary results show positive effect of open data policies on public service delivery, while limited improvement in accountability and mixed result in civic engagement.

1. Introduction: The OPEN Government Data Act

On 14th January 2019, the Open, Public, Electronic, and Necessary (OPEN) Government Data Act was signed into law in US. The Act was included in the Foundations for Evidence-Based Policymaking Act (Public Law 115-435) as Title II. The open data proposal will require federal agencies to publish their information online, using machine-readable data formats. The Open, Public, Electronic, and Necessary (OPEN) Government Data Act provides a sweeping, government-wide mandate for federal agencies to publish all their information as open data, using standardized, non-proprietary formats [11]. The Act builds on President Obama's May 2013 Open Data Policy (M13-13) and makes its key aspects permanent.

On 15th November 2017, the OPEN Government Data Act passed the US House of Representatives. The House unanimously approved the bill under suspension of the rules. The Act is included as Title II in the Foundations for Evidence-Based Policymaking (FEBP) Act of 2017 (H.R. 4174).

Earlier in the 115th Congress, a slightly modified bill was introduced in both the House (H.R. 1770) and Senate (S. 760) on 29th March 2017, with identical text [9]. On 17th May 2017 the Senate Homeland Security and Governmental Affairs Committee unanimously approved the bill for

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consideration in the Senate. On September 28th 2017, the Senate passed a revised version of the OPEN Government Data Act as an amendment to Sen. John McCain's Fiscal Year 2018 National Defense Authorization Act (NDAA) (H.R. 2810). The measure was ultimately removed from the defence package in the joint conferencing committee process. The Data Coalition and numerous policy partners worked to convince the Senate to take renewed action on the House passed a version of the OPEN Government Data Act in the Speaker's FEBP package (H.R. 4174). On 19th December 2018, the Senate passed H.R. 4174 by unanimous consent, and on 21th December, the House voted on a motion to suspend the rules and passed the Senate amended version of H.R. 4147 by a voice vote of 356 to 17. On 14th January 2019, President Trump signed the FEBP Act (Public Law 115-435), which contained the OPEN Government Data Act, into law [11].

The OPEN Government Data Act sets an official presumption that "Government data assets made available by an agency shall be published as machine-readable data…in an open format, and…under open licenses." It would make a federal agency's failure to utilize open data legally questionable. The legislation will provide a powerful tool for open data reforms in every area of the government's information portfolio. Indeed, the Act also requires agencies to maintain, and publish, a comprehensive data inventory of all data assets. The data inventory will help agencies and open data advocates identify key government information resources and transform them from documents and siloed databases into open data [11].

The OPEN Government Data Act seeks followings:

1) Define open data without locking in yesterday's technology.

2) Create minimal standards for making federal government data available to the public.

3) Require the federal government to use open data to improve decision making.

4) Ensure accountability by requiring regular oversight.

5) Establish and formalize Chief Data Officers (CDO) at federal agencies with data governance and implementation responsibilities.

This US OPEN Government Data Act is one of the most recent and significant experiences regarding open data and open government; however, what open data and open government really mean is not an easy question and has divided authors as well as government institutions. Indeed, since OECD started to promote open government data [26] [33], many literatures have dedicated on this issue for years [12] [15] [36] [37] and numerous countries have introduced similar initiatives, policies, and acts [2] [22] [38]. The paper, thus, explores these questions, first through literature review and then, with a case study of UK government and its policies.

2. Methodology and Design of the Research

In order to understand open data and open government, there are several essential concepts to be explored. Furthermore, most of the literatures on the topic investigate in conceptual manner, while there are few empirical researches. Thus the paper first explores several concepts through literatures and then analyses a case of UK government. Regarding the case study, which is a qualitative research, the author examined government documents, including policy papers and national plans, while interviewing key actors. The author and her research partners conducted more than 20 semi-

structured interviews between November 2016 and November 2018. The interviews were conducted without recording but with detailed transcriptions, in order to encourage interviewees to express freely their opinions and views.

The aim of this research is to investigate whether Open Data improved policy making, service delivery, accountability, and participation. The research approach is a single case of the UK government [40]. Data were collected indeed from two sources: written documents available in the public domain and semi-structured interviews to key actors. Case study research is appropriate for this research as it makes use of multiple sources of evidence in order to create a picture of the phenomenon under investigation and is methodologically appropriate when exploring complex issues, those that occur over an extended time period [16] or when researchers have little or no influence on the event being studied [40] such as in this research. Document analysis is appropriate in this case based research as documents are rich source of data and in this instance they provided valuable primary data. Documentary analysis of strategic plans, policy documents, and government reports contributed to the understanding of the case study in three ways: first, the document analysis allowed the context for the case study to be understood, prior to the interviews and data collection; it also provided a historical account of the open data policy in UK; and finally, using document analysis also allowed for triangulation of data obtained through the interviews [29].

Information used in this paper is based on the interviews conducted to the followings among others conducted during the same period:

1) Fliss Bennée, Head of Data Governance, Department of Digital, Culture, Media, and Sport,

2) Mark O'Neill, former Chief Digital Officer, Department of Education,

3) Mike Rose, Head of Business Development, Open Data Institute,

4) Peter Fitzboydon, CEO, London Sport (at the time of interview in November 2016)

5) Emma Boggis, CEO, Sport and Recreation Alliance

6) Liz Nicholl, CEO, UK Sport

The paper is part of the results of a research on Big Data and Open Data in relation to evidence-based policy making in the area of sport policy, a research project awarded by Japan Society for the Promotion of Science (JSPS) entitled "Research on sport policy making based on Big Data: Olympic Games as a trigger" (Research ID: 18H00819 2018-2023) and those of the previously JSPS founded research project entitled "UK-Japan comparison on Olympic Game and Sport Policy (School sport policy and regional sport policy)" (Research ID: 16K13004 2016-2018).

3. Open Data and Open Government: Concepts and theoretical background

Why Open Data has become important for governments and in policy making? Before answering to this question, some key concepts should be clarified.

Data comprises facts, observations and raw information. Data are, indeed, forms of information. The concept of data is itself worthy of book-length explication [5]; however, in order to explore how data are created, used and understood, it might be enough to define it by examples, such as

facts, numbers, letters, and symbols [24]. Data itself has little meaning if it is not processed [23]. Indeed, first set of interviews conducted in 2016 and 2017 on the sport policy revealed that London Olympic ticketing data failed to be used in the way that various related institutions hoped, proving that data collected without clear design of usage proved to be useless as information [20], because of this characteristic. Information, indeed, consists of interpreted data and has discernible meaning. It describes and answers to questions like "who?", "what?", "when?", and "how many?" [23].

Open Data refers to the principle according to which public data (gathered, maintained and used by government institutions) should be made available to be accessed and reused by citizens and businesses, while Big Data is used when the amount of data that an organization has to manage reaches a critical volume that requires new technological approaches in terms of storage, processing, and usage. Volume, speed, and variety are usually the three criteria used to qualify a database as Big Data [23]. Openness is a trend, which have changed relationship among stakeholders in all sectors [5]. Open models of government, standards, data, services, and collaborative production of knowledge have contributed to this transformation. Openness is claimed to promote the flow of information, the modularity of systems and services, and interoperability [5].

Open Government Data is a philosophy and increasingly a set of policies that promotes transparency, accountability and value creation by making government data available to all [26]. Public bodies produce and commission huge quantities of data and information. By making their datasets available, public institutions are believed to become more transparent and accountable to citizens. By encouraging the use, reuse and free distribution of datasets, governments are expected to promote business creation and innovative, citizen-centric services. Open Government Data has been introduced and promoted by OECD [26] [33]. The importance of data, especially Open Data in government is different from, for example, that in scientific community [5].

Data governance constitutes a framework of quality control for management and key information resource protection within an institution. Its mission is to ensure that the data is managed in accordance with values and convictions of the institution to oversee its quality and to put mechanism into place that monitor and maintain the quality. Data governance includes data management, oversight, quality evaluation, coherence, integrity and ICT resource security within an institution [23].

Open Data, Open Government, and Open Government Data have become important concepts in government institutions for the above mentioned, mostly empirical reasons. Theoretically, the importance of openness, especially that of data in government, can be explained from New Public Management (NPM) concept. Information and Communication Technology (ICT) is considered to be introduced in public administration along with other new managerial techniques, especially under the NPM concept in the Nineties. With NPM, the use of ICT started to focus on managerial process of public administration. Various managerial tools enabled by ICT were introduced to improve the speed and transparency of administrative procedure. Exchange of documents and elaboration through multiple actors became easier, thus improving interaction and collaboration among stakeholders. Not only the internal managerial issues, but also the public service delivery utilizing and benefitting from ICT, especially web-based technologies became popular. Many former counter services were transformed into on-line services, making citizen possible to access directly to information as well as public services [21].

E-Government has been challenged with "digital era governance", which goes beyond the NPM. In this view, all stakeholders are related in public governance network. The introduction of New Public

Governance (NPG) in public service delivery is an important turning point as concept as well as practice [1] [18]. Citizens and communities are invited to participate not only in the decision-making process, but also the service delivery process, thus realizing co-design, co-creation, and co-production. They are redesigning the structure of service delivery [1].

Digital services of governments have become an importance aspect of technology and/or innovation driven public services. This concept as well as practice was enabled through various elements, including co-design and co-production with citizens and other stakeholders, digital technologies enabling data analytics, thus better designing services, based on data and evidences, NPG helped the realisation of co-production with citizens and other stakeholders, while NPG encouraged ICT to be an effective and efficient instrument of government [1] [19] [21]. Many of the digital services are not only a result of technological innovation and advancement, but also a product of institutional reform and revolution. ICT, per se, is not a solution, but could offer and become an opportunity.

In line with this theoretical evolution of public sector governance, Open Data, Open Government, and Open Government Data have become essential to government institutions, not only for their innovation [6] but also for the possible realisation of co-design and co-production with citizens and other stakeholders [21]. Indeed, the research focuses on this topic because of this very reason.

4. UK Approach to Open Data and Open Government: Case Study

The UK's third Open Government National Action Plan 2016-18 (NAP), published during the Prime Minister's Anti-Corruption Summit on 12th May 2016, builds on the first and second plans published in September 2011 and September 2013. It sets out 13 commitments in line with the Open Government Partnership values of access to information, civic participation, public accountability, and technology and innovation. The third NAP was developed in dialogue with the UK Open Government Network (OGN), a coalition of active citizens and civil society organisations committed to making government and other powerful institutions work better for people through enhanced transparency, participation and accountability.

The UK government is committed to Open Government, not just every two years when it publishes a new NAP, but as business as usual. The UK's fourth National Action Plan for 2018-2020 was launched in 2018 and was developed in collaboration with the UK's Open Government network. Commitments in the UK NAP include the followings:

1) The UK being the first G7 country to commit to the Open Contracting Data Standard (OCDS) for contracts administered by a central purchasing authority, the Crown Commercial Service. This means that the whole process of awarding public sector contracts - from bidding right through to building - was made public for the first time in 2016;

2) Leading the world in creating an open register of beneficial ownership so everyone can see who owns what in Britain;

3) The introduction of reusable unique identifiers to the UK's published government grants data and central procurement data. This represents a step change in how people can monitor how government is spending taxpayers' money.

Open Government National Action Plan has developed between 2016 and 2018 as follows.

The third UK Open Government National Action Plan was published in May 2016. This plan set out commitments to open government in the UK and the ambitions of the UK Government for the next two years. This updated version of the third Open Government National Action Plan includes new commitments from each of the devolved administrations: the Northern Ireland Executive, the Scottish Government and the Welsh Government. This plan has been co-created with members of civil society and active citizens, coordinated through our open government networks. The UK government is committed to continue to work with civil society to both implement and develop commitments in future.

The major steps and their related publications are the following:

- UK Open Government National Action Plan 2016 to 2018 (12 May 2016): policy paper
- United Kingdom National Action Plan Commitment 13 - Government and Civil Society Collaboration (7 October 2016): policy paper
- Commitment from the Scottish Government (7 December 2016): policy paper
- Commitments from the Welsh Government (7 December 2016): policy paper
- Commitments from the Northern Ireland Executive (7 December 2016): policy paper
- Open Government Partnership: UK national action plan 2015 launch (13 July 2015): speech

The UK government's second NAP, published at the OGP Summit in London in October 2013, and progress against delivery

- Open Government Partnership: UK National Action Plan 2013 (27 June 2013): consultation outcome
- OGP UK National Action Plan 2013 to 2015 (10 March 2015)
- Open Government Partnership National Action Plan 2013 to 2015: mid-term assessment (25 March 2015): consultation outcome
- Open Government Partnership: UK Government delivering greater transparency (14 October 2016): press release
- Open Government Partnership National Action Plan 2013-15 final report (14 October 2016): policy paper
- UK uses Open Government Partnership summit to make transparency a reality for citizens (31 October 2013): press release

From September 2012 to October 2013, the UK government was the lead co-chair of the OGP, culminating in the OGP summit in London in October 2013. Indeed, UK hosted Open Government Partnership Summit 2013, on 5th December 2013. Related to these initiatives, there are following publications:

- Open Government Partnership: UK co-chair vision (26 September 2012): policy paper

- The Open Government Partnership Summit (10 April 2014): case study

OGP UK 2011 National Action Plan was the first NAP published at the launch of the OGP in September 2011. The governments' self-assessment report provides an honest account of the UK's performance up to April 2013.

- UK Open Government National Action Plan 2011 to 2013 (20 September 2011): policy paper

- OGP UK 2011 National Action Plan (24 April 2013): consultation outcome

These policy papers and related repots have contributed to formulate the open government data in UK, which is another example.

The UK government has promoted various initiatives on open government data for all this period; however the outcome seems mixed, according to some of the interviewees. Open Data requires not only technology, but also and especially coordination among government institutions, which is not easy to achieve, mostly because of political and organizational reasons. Open Data initiatives, thus, need good design and long preparation in each institution and then among institutions. Often, some interviewees noted, institutions do not know what data they have and thus what to share.

One of the most interesting factors emerged from the interviews was the fact that Open Data Institute (ODI), one of the main institutions in charge of open data policies in UK, was instituted by bottom-up initiative [25]. Indeed, the ODI was co-founded in 2012 by the inventor of the web Sir Tim Berners-Lee and artificial intelligence expert Sir Nigel Shadbolt to show the value of open data, and to advocate for the innovative use of open data to affect positive change [25]. Indeed, ODI claims that they are "an independent, non-profit, non-partisan company" since its creation. ODI works with government to build an open, trustworthy data ecosystem. Their mission is to bring about sustainable behaviour change within companies and governments that hold and use data. They do this through three key activities: 1) Sector programmes - coordinating organisations to tackle a social or economic problem with data and an open approach; 2) Practical advocacy - working as a critical friend with businesses and government, and creating products they can use to support change; and 3) Peer networks - bringing together peers in similar situations to learn together. Indeed, the business model and the organizational structure of ODI reflect their idea of openness; it is a network, rather than a traditional institution. Co-design, co-creation, and co-production are part of the organizational culture as well as business model, which are parallel to the NPG model in government and have shown effective in some cases, but also very difficult in other occasions, both because of the model itself [19].

ODI advocates for and supports practices that increase trust and trustworthiness: building ethical considerations into how data is collected, managed and used; ensuring equity around who can access and use data; engaging widely with affected people and organisations. They help people identify and address how open data can be used effectively in their sector to improve decision making and processes, deliver more efficient and effective services and products, and fuel economic growth and productivity. They connect, equip and inspire people to innovate with data [25]. ODI offers: 1) Strategic advice – identifying how data can help to achieve programme goals and how to measure success; 2) Policy development and guidance – scrutinising the interaction between general data governance practices and sector norms; 3) Technology development – creating appropriate data

standards and the tools needed to support them; 4) Research – from creating case studies of the role of data in the sector to rigorous impact evaluation; 5) Training – including blended learning packages that combine face-to-face, eLearning and webinars; 6) Running competitions and acceleration programmes – to foster innovation in the sector; and 7) Building communities within the sector – and communicating clearly with them [25].

Although it is an independent institution, ODI works with government and for various government policies as well as projects. Many of the staff members are former civil servants and they have extended personal network with former colleagues in the government and among business partners. Indeed, among the interviewees, many of those who work in private business are former civil servants and know their counterpart in the public sector. The revolving door system of UK favours this practice and has several advantages; however, from the transparency and accountability point of view, it also has several issues. Personal network does not necessary mean unethical behaviour or corruption, but winning the bid and working with former colleagues' projects sometimes raise ethical concerns. Co-production and accountability are, indeed, difficult to coexist.

The issues of Open Government Data are, according to the interviewees, are the following. First, institutions often do not know what data they have. Thus, to know what data they have is the first step. Second, data are not always updated and/or have the same quality, making difficult to use them together. Third, availability of data does not necessary lead to better governance, as institutions often have no idea how to utilise data. Forth, open data theoretically would contribute to transparency and accountability, but in practice, it is difficult to prove it. Lastly, open government data are believed to contribute to the policies as well as to the business, but the benefit to the latter has not been clear. The issues are related to the problem that data are neither information nor knowledge.

Some interviewees noted that this underuse of data was due to several reasons: first, the data gathering often started without clear ideas how to use them, thus had some fundamental issues from the beginning; second, in the policy making process, the data analysis has been done in fragmented way and not systematically, thus the potential of open data was not fully activated; third, various actors had different ideas for open data; and forth and most importantly, many actors have not realised the potential of the open data.

Data are, indeed, often ignored and not utilised, especially for policy making [20]. The interviewees pointed out the lack of awareness of the key actors, the lack of coordination among these, the difficulty of analysis, and the difficulty in interpretation of data and especially in translating into public policy. The last could be also explained from different points of view; research suggests that the understanding depend upon the information and the way information is presented [3] [10]. Indeed, more detailed content will negatively affect understanding [4] [7] [8] [32]. The existence of data and its openness per se does not guarantee better understanding of the fact [13] [30] and better policy making. The results of literature review and research results suggest that guaranteeing the access to data and thus information does not necessary mean that they understand it, because of cognitive constrains, according to the cognitive load theory [17] [31] [35].

It might be important to note that the open government data often is considered in relation to evidence-based policy-making (EBPM). This is based on the belief that more available open data could contribute to better policy making [34] [39]. However, interviews, literatures, and facts so far have proved this difficult.

5. Open Data, Open Government Data and Co-production

Since the aim of the paper is to explore Open Data, Open Government, and Open Government Data, the last part investigates what have been done and what would be the future plans.

Open Data and Open Government Data are based on co-production with civil society and among institutions. Theoretically, open data is in line with NPG and thus in line with public service delivery with co-production [1] and technological innovation [6] [21]. Open Government Data is aimed to improve transparency and accountability, thus, also from this point of view, is in line with other public sector reforms, especially that of NPM.

As open data would contribute to evidence-based policy-making (EBPM), literatures of EBPM should also be considered. One of the traditional areas of policy which has used EBPM is healthcare and healthcare services are indeed benefitting not only from open data, but also from the digital technology in general [39], especially in order to change behaviour of citizen. Healthcare services are turning toward preventive healthcare and, for example, social prescribing in UK is an example of using data and co-produce service with civil society and citizens [28]. Social Prescribing is a means of enabling general practitioners and other frontline healthcare professionals to refer patients to a link worker - to provide them with a face to face conversation during which they can learn about the possibilities and design their own personalised solutions, i.e. "co-produce" their "social prescription" - so that people with social, emotional or practical needs are empowered to find solutions which will improve their health and wellbeing, often using services provided by the voluntary and community sector. It is considered to be an innovative and growing movement, with the potential to reduce the financial burden on the NHS and particularly on primary care [28]. This is a typical benefit of co-production of, and through, open data and Open Government Data.

The issues of open government data are not necessary related to technological solutions, but more on institutional design, design of dataset, interpretation and use of data, and making policy using data. Thus, both theories and experiences of open data suggest that the issues are similar to those of EBPM [39]. Previous research of the author showed that availability of data does not guarantee information and knowledge [20]. Furthermore, policy areas like healthcare and environment, where data and EBPM are important as well as effective, behaviour change of the citizens is essential, which again requires data. Social Prescribing would be an interesting experiment to co-produce healthcare services with civil society and individuals.

6. Conclusion: Findings and limitations

This paper aims to explore the theories and current situation of Open Data, Open Government, and Open Government Data in relation to policy making, public service delivery, accountability, and citizen co-production.

Literature review shows conceptual objectives and benefits of Open Government Data, while the policies in various countries show that they mostly follow these concepts. Interviewees, however, pointed out the operational issues of Open Government Data, which are easy to guess from the literatures, but not so easy to resolve, because the issues are related to the governance of public organizations and to the very nature of data. Interviews also revealed that there are issues such as capacity development on data analysis and digital technology in general. There are also limitations in Open Government Data, mostly due to the availability and the quality of data, which affect

usability of data, thus, affect policy making using the data.

However, we already know that having data does not lead to better information or better understanding [20]. Availability of data, thus, does not guarantee better policy making based on data as many hoped in rather naïve way. However, there are still strong beliefs among governments and institutions that Open Government Data would improve policies and business [34].

The case study shows that Open Data has improved public service delivery and started to realise co-production, thus civic engagement, to a certain extent; however, it has shown little evidence of improved accountability and had difficulties to be transferred into policy making process. The results of the case study contribute to theoretical discussions, as they show empirical issues, which are not necessary explored in many literatures. The case also contributes to the co-production of public service delivery discussion as well, since it is an example of it. Furthermore, the case can be seen in the context of EBPM as well, which has strong connection to Open Government Data.

Given the limitation of one case study, the further research which will follow would be on several other governments, and compare those cases. Since Open Government Data and EBPM are related to each other, theoretical study on EBPM would be another step to complete the research, while theoretical explanation within co-production and NPG should be explored.

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