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OPEN GOVERNMENT INITIATIVES IN PUBLIC SECTOR: A PROPOSED FRAMEWORK FOR FUTURE RESEARCH

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Abstract

The initiatives taken by many governments to open data flows between them and their societies are attracting huge attention by researchers and civil society bodies. The evolution from (OG1.0) to (OG2.0) started by emphasizing transparency and more engagement of the public. To attain such level, governments need to improve online engagement, make engagement meaningful through competitions and challenges, identify new collaborative platforms, build evaluation into program design, and integrate co-production within agencies initiatives. Open government concept did not stop at Obama's administration proposed dimensions, but extended to more complex and complicated models. This paper will examine the concept of open government and its major dimensions, review the literature, visit some experiences of the world, and propose a framework for research.

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1. Introduction

The United Nations e-government reports indicate that the development and achievements of member nations in relation to the progressive stages proposed is acceptable in the first and second stage. The 2012 report merged the first two stages, where the existence and information stage were merged into one stage labeled emerging presence [1] [2]. The five original stages reported in the 2010 report included the following: The first stage named the *emerging* stage, where governments have established their presence on the web. The second stage is named the *enhanced* stage, where governments started to provide full information about their services and government agencies. The Third stage is the *interactive* stage, where governments started their dialogue with their citizens (and businesses). The fourth stage is labeled the *transactional* stage, where services were conducted and some to full capacity. Finally, the fifth stage was named the *connected* stage, where one interface serves all types of services and departments.

The only downside of such shift is the negligence of the capacity, density, and adequacy of information within each stage. The notion of open government is closely related to information status, where more information is published and at some stage, the quality of information is an indicator of such openness.

The importance of e-government projects is not deniable. More countries across the world are embracing such phenomenon based on two major fac-tors: the first is related to the direction towards more utilization of technology and Internet applications. Even social media started to play a crucial role in defining the relationship between governments and their citizens (or businesses). The second factor is related to the political direction of e-government projects, where some researchers are still considering e-government a direction for improving services [3] [4] [5] [6], while others are embedding political dimensions like participation and transparency [7].

Based on the previous introduction, open government is an important concept where it extending from the concept of e-government. It emphasizes the status of information in each stage. Regardless of the country's achievement in e-government projects, their open government status can be assessed. This paper will review the literature to understand and summarize the concept of open government. Experiences from the World are investigated in the following section. Then a proposed framework will be depicted to guide future research.

2. Literature Review

Open government is an extension of the concept of e-government. It is not a sub-dimension of e-government, or a different concept. Rather, open government is e-government with focus on information status. The concept revolves around freeing information for the purpose of more efficient government work and a better and cheaper service for the public [8]. It is important to realize that public information is useful for citizens and thus needs to

be published and accessed freely [9]. The Obama administration defined open government around three dimensions: transparency, participation and collaboration. The initiative came in effect when the Obama administrative opened a website to grant accessibility to Federal Data to the public under their support for the transparency initiative (www.data.gov). A description of the accomplishments of such initiative will be provided under transparency.

The argument behind such a start depends on the core meaning of open government, where being transparent is the major core dimension. If governments need to know the needs of their citizens, then they should open communication with them, which means more participation. Finally, being open is not about informing and receiving feedback, but enforcing such feedback, which puts governments into the collaborative mode with their citizens. Such process is critical to reach the fully open government state.

We can define open government as a direction of e-government where more information is exchanged between governments and their citizens (businesses) in a transparent, participative and collaborative mode. The open government process needs to keep all characteristics of information to the required quality. The following sections will review sample literature related to the three dimensions.

2.1 Transparency

Information dimensions related to public records include the following: accuracy, validity, security,

preservation [9], comprehensiveness, relevancy, timely [7], reliable, and of high quality [10]. Transparency was the major initiative by the Obama administration, where a website was opened (www.data.gov) to grant accessibility to Federal data [11]. Since then, the initiative accomplished few directions like better participation by the public, more data availability, more data disclosure, more compliance to accessibility standards, and a review of existing rules pertaining to open data. Such directions were attained through many initiatives and policies. After two years of the US initiative, an empirical study was conducted to see what factors influenced the three pillars of open government based on the perceptions of US public officials; the authors concluded that publishing accurate and needed reports will result in a better transparency [12].

Transparency is defined as the extent to which governments make available data and documents to the public according to their needs, where they later assess governments' actions and hold them accountable for their actions [13]. The relationship between transparency and e-government is conceptually legitimate, where the more governments use ICT, the more they need to be transparent and vice versa. Such argument is supported by Harrison et al. [10] as they asserted that the shift from information use within e-government websites to more transparent systems is directing towards a more political term which is democracy. Other researchers [14] went further to test if e-government and transparency are related empirically, where an associa-

tion test was conducted for global archival data and concluded to a significant correlation between them [14].

Transparency is critical as the more governments open data, the more the chances they drop in the trap of violating privacy issues [15]. Governments need to protect citizens' and businesses' private data by enforcing the necessary security measures. Based on that, is required more emphasis on the training needs of public officials when enforcing transparent measures of data [16].

Based on the previous summary, we can say that transparency can be defined as the open communication between governments and their citizens guarding for the full capacity of information status (dimensions of information: completeness, time related, relevancy, accuracy, quality, and ownership).

2.2 Participation

E-participation involves "*the extension and transformation of participation in societal democratic and consultative processes mediated by information and communication technologies (ICTs), primarily the Internet*" [17]. Participation is attained through more than one force in society; one of them is open government data. It is conceptually assumed that a link between open government and participation growth would be significant.

A proposition by Goble [18] concluded that linked open data will lead to better public participation. The author proclaimed that less than 5% of the

available data sets on UK website are considered linked data. Such issue raises concerns about the progress of such initiatives throughout the world. Some researchers [19] related open government with participation as they proclaimed that open government efforts will yield to better participation. The authors cautioned that such efforts might fall short if the purpose is to introduce the complexity of policy formulation to citizens. On the same line, the size of published linked data is largely contributed to theoretical research contributions and not for applicable industrial data suitable for public use [20].

On other research directions, Abu-Shanab and Al-Dalou' [21] extensively summarized the literature related to e-participation and concluded to five levels of participation: e-informing, e-consulting, e-involving, e-collaborating, and e-empowering. Such premise confuses the dimensions of open government as it considers collaborating as part of the participation process. It is still considered by some researchers that e-participation is a major dimension of e-government, which puts open government as a dimension of participation initiatives [7].

Part of the tools reported to have significant influence on participation is using Wikis [12]. Many tools are supporting participation initiatives and specially web 2.0 tools like websites, social media, wikis, blogs and video publishing websites (examples are included in the work of [21].

2.3 Collaboration

Collaboration is the most controversial dimension among the three pillars of open government, as it means the inclusion of two parties in a process to produce something (a report, information, product, or any other item). Such argument might be easy to administer if the collaborating parties are public and capitulate to same source of authority. But when the two parties are different, like the transactions in G2C and G2B, then the final product is disputable and need to be defined with respect to ownership. Based on that if we carefully review the Obama initiative, we can see that it did not mean to open government without any restrictions, but emphasized the protection of privacy and security and guaranteeing the accessibility of disabled under national legal framework [8].

Collaborative effort by government is key in open government and closely related to transparency [12]. The empowerment of people (the ultimate goal of democracy) is reached by more collaboration between people and their government [22].

Collaboration does not mean G2C only, but might include G2B or G2G initiatives, where great synergies are attained through the cooperation towards saving money and reducing costs. The literature related to collaboration emphasized the requirement of specific tools for the success of collaboration and public participation [23].

We can define collaboration as the joint effort to participate in the democratic process. Such definition can be extended to be a sub-dimension of e-participation, a joint effort between governments and citizens (or businesses), a directed effort towards a product or service, and a legal protection of parties involved in the process and their production. Such definition guards for privacy issues and requires specific tools and systems to allow for such collaborative process.

2.4 Reflections from countries of the world

The experiences of different countries of the World in open government present an accurate picture of current practices and useful insight for research directions. The Indian experience [24] reflects a bottom up pressures that reflects the demand of public towards an open government practices. The authors proclaim that the open government partnership failure is forcing the government and parliament to consider some legislation related to transparency of information [24].

China started its efforts towards open government in 2007, forcing agencies to disclose certain types of information and responding positively to citizens' request to do so. The second step was to review all agencies performance through an annual report (Government Website Performance Review). Finally, measures of performance were established with each constitutions of sub-dimensions, where all indicators were related to open government direction [25].

Other examples were summarized by Mergel [26] and included the UK and Australian catalogues of contracts and spending data (through a dedicated website), the New Zealand portal with public non-

personal data, and the Kenya Open Data Initiative (KODI) that focused on spending information. It is interesting to mention that some researchers doubt the real influence of the Obama initiative in the USA when related to transparency. Open government was described, like transparency, as a double sword strategic step which might result in unrealistic expectations based on full/partial information disclosure [27].

The UK website (data.gov.uk) is a good example of open government initiative, where 5400 data sets are available for use and reuse by diverse stakeholders. The strength of such website is collecting all these data sets in a searchable fashion so stakeholders use it for decision making and more insights. Another good example is the World Bank's website (data.worldbank.org), where country data is organized, re-arranged to be more suitable for navigation, research and decision making [28].

A study of the Spanish laws [29] related to transparency showed that regulations fall short in guaranteeing transparency and citizens' right to information. The author emphasized the contribution of the Spanish E-government Act to citizens' right to information, the accessibility and security of information, and the electronic tools contributing to the diffusion of information like electronic offices [29].

2.5 Summary and Proposed Conceptual Model

Open government initiatives are assumed to enhance the relationship between governments and their citizens [30], and maybe businesses through

transparency, participation and collaboration. Accountability is also much enhanced through linked data initiatives [18], which comes as an integral part of open government. One of the reported challenges is the restrictions forced by existing laws, where governments need to resolve legal constraints on data disclosure [15]. It is important to realize the movement towards more laws related to open government, where 93 countries have established some laws or regulations (by the end of 2012 and as stated in [25, p. 4].

Governments spend money on data, where sacrificing such cost might be a challenge for governments. The case proposed by Good speed [15] in relation to GIS data is an example of such obstacle. The author emphasizes the importance of dealing with the practical, ethical, and legal considerations related to accessing public information. Empirical Research in the USA [12] revealed an acceptable satisfaction with the achievements of Federal government in the country. Government officials felt that open government initiatives improved performance and extended government outreach to citizens [12].

Open government can be redefined to be *the actions and policies governments take to make their data and information open based on citizens' needs (and even businesses) through a connected communication, participation and collaboration mode.* The previous few sections did not add much to the open government dimensions. The literature revolves around transparency, participation, and col-

laboration, where segregating the dimensions of the known open government concept can be difficult at this stage. This paper tried to explore the concept and try to understand how it contributes to our knowledge of e-government initiative. The first two stages of government revolve around information, where transparency is crucial. The third evolution stage described earlier revolves around the communication and transaction, where the participation of citizens and businesses is important. Finally, when we reach a connected stage (final one) we need to collaborate as one body to enhance services and improve the decision making process. Based on that, we can summarize our understanding of the open government environment and translate such definition into a conceptual model that is depicted in Figure 1. The model adopt a process with flow direction, where collaboration can be more valuable, but difficult with respect to legal and administrative requirements and infrastructure.
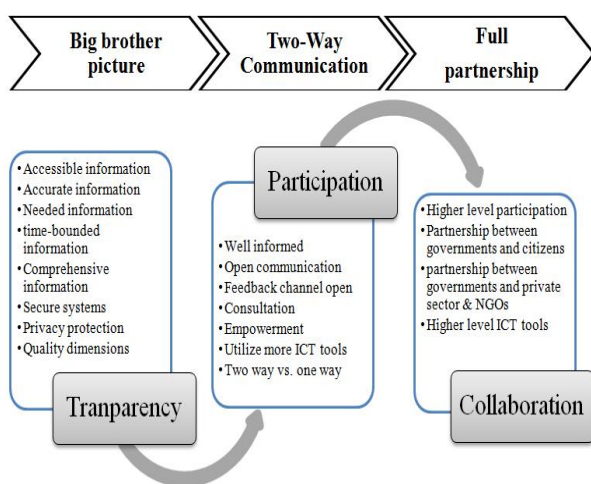

Figure 1: Open government flow model
Developed by the author

The model starts with a focus on transparency, where information flow from government is crucial to the success of e-government. Such perspective can be characterized by being a big brother picture more than further stages. The model (Figure 1) lists the characteristics of such stage in the process.

The second stage focuses on participation, where we try to differentiate between the more developed stages of e-participation in the literature to come up with a focus on two-way communication and transaction of services. The say at this stage is still to governments, but the contribution of citizens is evident. Figure 1 again depicts the characteristics of this stage, where the theme of the process is switched to a two-way communication.

Finally, the model tries to accommodate a position of more developed e-participation stages and segregated the collaboration stage to fit with the known open government initiative. The model depicts a picture of more collaboration and involvement in decision making process where citizens and government are perceived as partners.

3. Conclusion and Future Work

Open government initiatives are limited to three major dimensions: participation, transparency and collaborations. Research [12] indicated that satisfaction with public achievements based on open government is closely related to advancements on the three dimensions [12].

On the other hand, open government initiative is a strategic direction that might not be suitable for all

countries, being open (like open source) is the opposite of intellectual property and copyright protection [31]. Before advancing to open government, some questions need to be answered [32]: To whom information must be open? Which agency should evaluate availability? How to handle copyright or fair use issues?

The debate around open government entrenches into more than one direction, where public information is collected, organized, and stored by governments, but not fully owned and not freely disseminated and reused. The legal constraints of ownership reuse rights, and legitimate representation of real owners (citizens and businesses) is a debatable issue [33], and vulnerable to private sector forces and interests [34]. A study related to the Chinese experience [35] in open government concluded to a major challenge facing the success of such step, which is the attitude of public officials [35]. Research focused more on typologies of e-government frameworks where much research focused on a trilogy of infrastructure, social, and governmental relationships [36]. Finally, issues of trust in e-government become more potent when governments go open [37].

Future work is required to explore perceptions of citizens, business owners, and public officials in relation to the model depicted and its dimensions. Also, an itemized instrument needs to be built to better understand all the dimensions of open government. Such instrument will help researchers explore the domain and investigate its direction. Fi-

nally, much jargon revolves around open government efficiency and strategic direction, researchers around the world are invited to test such argument and see if such phenomenon is a fashion or a fad.

4. References

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