



Contents lists available at ScienceDirect

Government Information Quarterly

journal homepage: www.elsevier.com/locate/govinf

Open Government Data in Africa: A preference elicitation analysis of media practitioners

Eric Afful-Dadzie ^{a,*}, Anthony Afful-Dadzie ^b

^a Faculty of Applied Informatics, Tomas Bata University in Zlín, Czech Republic

^b University of Ghana Business School, University of Ghana, Accra, Ghana

ARTICLE INFO

Article history:

Received 27 May 2016

Received in revised form 14 February 2017

Accepted 15 February 2017

Available online xxxx

Keywords:

Open Government Data (OGD)

The media

Web portal

Preference modelling

Developing countries

Conjoint analysis

ABSTRACT

Open Government Data (OGD) continues to receive considerable traction around the world. In particular, there have been a growing number of OGD establishments in the developed world, sparking expectations of similar trends in growing democracies. To understand the readiness of OGD stakeholders in Africa especially the media, this paper (1) reviews current infrastructure at OGD web portals in Africa and (2) conducts a preference elicitation analysis among media practitioners in 5 out of the 7 OGD country centers in Africa regarding desired structure of OGD in developing countries. The analysis gives a view of the relative importance media practitioners ascribe to a selected set of OGD attributes in anticipation of a more functional OGD in their respective countries. Using conjoint analysis, the result indicates that media practitioners put premium on 'metadata' and 'data format' respectively in order of importance. Results from the review also reveal that features of current OGD web portals in Africa are not consistent with the desired preferences of users. Overall, the study provides a general insight into media expectations of OGD in Africa, and also serves as a foundational knowledge for authorities and practitioners to manage expectations of the media in connection with OGD in Africa.

© 2017 Elsevier Inc. All rights reserved.

1. Introduction

Open Government Data (OGD) is gradually resonating with governments around the world (Gonzalez-Zapata & Heeks, 2015; Krishnamurthy & Awazu, 2016; US Gov., 2016). For instance, as of 2015, 52 countries and 164 regions (cities and districts) around the world have functioning OGD centers (US Gov., 2016). This development is welcoming especially given the fact that, public data had for a long time been the exclusive reserve of the state (Yiu, 2012). Besides the individual country initiatives, major global development-oriented organizations have also been advocating for a broader acceptance of OGD by its member countries. Some of such organizations are the World Bank, The Organization for Economic Co-operation and Development, International Monetary Fund, United Nations, Bank of International Settlements, European Central Bank, African Development Bank, the statistical office of the European Union (EUROSTAT) and the European Commission (OECD, 2014; AfDB, 2011; AfDB, 2014; World Bank, 2015).

Despite the growing acceptance and interest in OGD, the definition, scope, expectations and preferences among key stakeholders such as politicians, civil society groups, funding agencies, public sector officials

and the media have been varied (Gonzalez-Zapata & Heeks, 2015). However, while the definitional differences and the seeming discrepancies in the scope of OGD are not surprising, the logistics, standards and methodologies are expected to be synchronized. In particular, standardizing the technical requirements is key to guiding OGD adaptations around the world. In addition to achieving consistency in technical requirements, understanding preferences and expectations of key actors is also viewed as a positive step to successfully localizing the OGD concept in various regions around the world (Martin, Kaltenböck, Nagy, & Auer, 2011). According to Stoneman (2015), one key actor conspicuously missing in most OGD discourses is the media - professional practicing journalists including those in the print and electronic media (radio and TV), as well as online journalists such as bloggers. For instance, while the media's role in Freedom of Information (FOI), otherwise known as Right to Information (RTI) is well recognized (Burgess, 2015; Giannone & De Frutos, 2016; Stoneman, 2015), its role in OGD has not been well-defined or discussed. Stoneman (2015) posits that the media is both a beneficiary and an agent of OGD. As beneficiaries, the media stands to gain in a functional OGD, by having ready access to data for its work. In addition, media practitioners also stand to benefit by using OGD to hone their skill sets in data journalism or precision journalism (Lewis & Usher, 2013; Stoneman, 2015). As an agent of information channel and dissemination, the media has the capacity to create and shape public opinion on the usefulness of OGD (Sambrook, 2013; Martin et al., 2011;

* Corresponding author.

E-mail addresses: afful@fai.utb.cz (E. Afful-Dadzie), atosarsah@gmail.com (A. Afful-Dadzie).

Network, 2013; Stoneman, 2015). In view of this and to facilitate the role of the media in OGD, it is imperative to understand their preferences and expectations.

This paper therefore conducts a preference elicitation analysis of media practitioners in 5 out of the 7 OGD country centers in Africa to determine preferences of media practitioners regarding features of an ideal OGD web portal. The preference model employed also allows for the determination of the relative importance of the preferred features by the media practitioners. Since the conception and the formal launch of OGD, several studies ranging from definitional challenges among different stakeholders (Gonzalez-Zapata & Heeks, 2015; Vetrò et al., 2016), perceived benefits, myths and challenges (Martin, 2014; Janssen, Charalabidis, & Zuiderwijk, 2012; Robinson, Yu, Zeller, & Felten, 2009), standards and frameworks (Bennett & Harvey, 2009; Herzog, 2014), to policy issues (Martin, 2014; Yiu, 2012; Zuiderwijk & Janssen, 2014) have been authored. Though some works have focused on reporting on initiatives made over the years in some countries (Attard, Orlandi, Scerri, & Auer, 2015; Krishnamurthy & Awazu, 2016; Ubaldi, 2013; Huijboom & Van den Broek, 2011; Rahemtulla, Kaplan, Gigler, Cluster, Kiess & Brigham, 2011; Ohemeng & Ofosu-Adarkwa, 2015), none so far has conducted a technical infrastructural audit of OGD web portals in accordance with established standards and requirements. Furthermore, none of the previous works on OGD, has attempted to understand preferences and expectations of stakeholders in specific regions around the world, with a view to understanding the adequacy of current standards and methodologies. The study therefore fills theory and research gaps in two folds: First, an audit is conducted of the current infrastructure used at OGD centers in Africa. The audit, reviews the current web services infrastructure offered on each country's OGD web portal, grouped mainly into web portal *functionalities* and *contents*. The second contribution of the paper focused on understanding media practitioners' preferences of ideal OGD features or characteristics. The traditional conjoint analysis method was deemed appropriate for building the preference and elicitation model. Further, relative importance assigned by media practitioners are segmented based on their socio-demographic characteristics.

The rest of the paper is structured as follows. First, a brief description of current state of the art at OGD centers in Africa is provided. This is followed by the methodology, where the mathematical theory, the design and implementation of conjoint analysis are presented. The results, discussion, recommendations and conclusion are further presented.

2. State of the art of Open Government Data centers in Africa

The growth of OGD centers in Africa has generally slowed in spite of the high expectations since its launch in 2011 (Kassen, 2014; Cretu & Manolea, 2013). According to Open Government Partnership, the pioneering organization responsible for the global OGD launch, there are 11 countries in Africa out of 69 in the world that have signed the OGD declaration as of 2016 (OGP, 2016). However, only 7 out of the 11 countries comprising of Ghana, Sierra Leone, Tunisia, Morocco, South Africa, Kenya and Tanzania have functioning OGD web portals (US Gov., 2016).

To understand the level of progress made in Africa, this section reviewed the OGD setup, tools and standards currently implemented on the various OGD web portals for the seven African countries. In particular, the examination focused on the technical capacity (web content and functionalities), revealing features (standards) currently available and those missing across the various OGD country web portals.

2.1. OGD portal audit strategy

The World Wide Web Consortium's (W3C) benchmarks for publishing OGD data (Bennett & Harvey, 2009) and the World Bank's Technical option guide (Herzog, 2014), spell out technical requirements necessary for establishing efficient and modern OGD data centers. Together, the

two standards among other things, emphasize on (1) that public datasets are as much as possible published in their raw state rather than in an analyzed form, (2) that each dataset is accompanied by a well-documented metadata and (3) that data is stored in a range of formats – both human and machine-readable. Based on these technical requirements, as well as observing OGD web features on well-established OGD centers such as the US, UK and Australia, a range of OGD web characteristics were selected for the audit study. Table 1 explains the selected OGD features and the audit strategy used to establish the availability or unavailability of an OGD feature. The characteristics for the audit were conveniently divided into two broad categories of 'OGD portal content' and 'OGD portal functionalities' as shown in Table 1. Lower level categories under OGD portal content included *total datasets* (as at the time of this research), *number of data categories*, *links to external data sites*, *data currentness* (monthly), *metadata* and *data format*. Similarly, lower level categories under the 'OGD portal functionalities' classification, were *data search*, *data visualization*, *social media plugins* and *social media availability*.

Consistent with the guidelines, the study sought to determine how each country measures up on these metrics. A web content analysis (feature analysis) approach was used in the inventory audit by scanning through the web pages to identify relevant features. Most of the features such as *data search*, *links to external sites*, *social media plugins*, *data visualization*, *data currentness* and *number of data categories*, could easily be identified on each OGD website. However, the other features required thorough search through all the web pages. Table 2 presents the results of the OGD portal content and functionality audit findings. Apart from some measurable properties such as total datasets and number of data categories (subject areas), the rest of the metrics sought binary answers regarding the availability or otherwise of OGD features. If a feature is available, it is assigned the symbol (✓) and when not available, the symbol (x) is used. If the feature happens to be present on the webpage but not functioning, it is assigned the symbol (✓x).

2.2. Audit findings

This section summarizes the findings of the OGD web content and functionality audit (Table 2) giving an insight into the progress and deficiencies at OGD centers in Africa. In all, Kenya had the most datasets (about 8 times more than what the second highest country provided on its portal). Sierra Leone had the least number of datasets (as of the time of this research). On categories of data, Tunisia provides as many as 17 different categories of datasets though the country only provides three formats for its datasets – PDF, CSV and XLS(X). Some of the commonest data categories observed across all data portals were *education*, *agriculture*, *health*, *environment*, *governance*, *construction*, *energy and finance*. Some data categories were on subjects such as *state property*, *social affairs*, *real property*, *commerce* and *vocational training* which could have been classified under some higher categories.

Sierra Leone, Tanzania and Morocco do not provide links to external datasets stored on other publicly accessible servers. However, with the exception of Sierra Leone, all other countries were found to be providing up-to-date datasets. It is quite interesting that metadata which is one of the key features emphasized in the W3C benchmarks and the World Bank OGD technical guide have received no attention. Only Kenya provides data in a metadata form. Even that, Kenya provides only descriptive metadata without structural and administrative formats. There are mixed results on data formats. Tanzania provides data in only one format – comma separated value (CSV) whiles South Africa and Tunisia provide only two data formats. Kenya however, provides as many as 8 different data formats to ease data access, whiles Sierra Leone provides five different data formats. Technical guidelines dictate that OGD centers do not become just data repositories, but offer data in machine readable formats such as JSON, XML, API, RSS, RDF etc. In this regard, Kenya stands out among the 7 countries.

Download English Version:

<https://daneshyari.com/en/article/5110619>

Download Persian Version:

<https://daneshyari.com/article/5110619>

[Daneshyari.com](https://daneshyari.com)