

Public Sector Information and Open Government Data

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ABSTRACT: *This paper tackles the distinguished case studies of some countries in the domains of Public Sector Information (PSI) and Open Government Data (OGD), and demonstrates the current situation of Egypt related to them. The paper shows as well why the OGD is needed and its benefits on the political, economic, social, and international readiness axes.*

KEYWORDS: Public Sector Information, Open Government Data, Open Data for Development

INTRODUCTION

In the last decade research has shown that open access to Public Sector Information (PSI) increases the efficiency and transparency of public sector and drives to a knowledge-based economy. Thus, a large number of governments over the world have been focusing on maximizing the benefits from PSI in terms of citizen participation and empowering innovation in society [1].

PSI & OGD Definitions

PSI is broadly defined by OECD in 2008 as “information, including information products and services, generated, created, collected, processed, preserved, maintained, disseminated, or funded by or for the Government or public institution” [2]. PSI is characterized by being dynamic, continually and directly generated by the public sector and associated with its functioning (for example, meteorological data, business statistics), and by being readily useable in commercial applications [3].

OGD is a subset of the PSI and is defined as open data produced or commissioned by the government (or government controlled entities), where the term “open data” refers to data that can be freely used, re-used, and distributed [4]. OGD is generally accepted to be data gathered during the course of business as usual activities which do not identify individuals or breach commercial sensitivity [5]. OGD initiatives and the development of OGD portals in particular, have been thriving since the mid-2000s at both the central and local government levels in OECD and non OECD countries [6]

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DISTINGUISHED CASE STUDIES

United Kingdom (UK)

UK was concerned with improving access and re-using the PSI even before the adopting the European directive on the re-use of PSI in 2003. A number of initiatives encouraged this new approach in UK including the Open Government License, the launch of [www. data.gov.uk](http://www.data.gov.uk), and the regulation of government information traders under the Information Fair Trader Scheme. The UK government aimed to develop new and simpler license models; establish a regulatory and complaints framework; and to make more public sector data available on government websites via central portals [7]. A number of government-sponsored and independent bodies was involved in UK to contribute in making it a major player in openness and re-use of PSI as follows:

1. The public sector transparency board created in June 2010 and composed of an expert group to advise and drive forward its transparency agenda. The first publication of this board was the Public Data Principles.
2. The independent Open Data Institute (ODI) which is mainly concerned with demonstrating the commercial value of Open Data and was funded by the UK government with 10 million GBP
3. The Public Data Group (PDG) which is composed of four data-rich organizations (Ordnance Survey, the Met Office, Companies House and HM Land Registry). It is mainly dedicated to improve access to public data, drive best practices both within and beyond its member organizations, develop new activities, and create efficiencies in its member organizations and the wider public sector
4. The Data Strategy Board (DSB) which is ministerial advisor board that was closed in June 2013. Its main goal was to create maximum value from the data of the Public Data Group (PDG) and beyond
5. The Open Data User Group (ODUG) helps the government to understand the requirements of users collecting datasets and what datasets are required

Another range of tools and resources to promote and exemplify the potential of PSI re-use are now available in UK such as the following:

1. Data.gov.uk which was established and launched by the government in 2010 [8] as a searchable portal to release public data. Over 9,000 datasets are available on this portal, from all central government departments and a number of other public sector bodies and local government.
2. The UK Government License Framework (UKGLF) which was launched by the National Archives in 2010 to provide a policy and legal overview of the arrangements for licensing the use and re-use of public sector information, both in central government and the wider public sector where the Open Government License (OGL) is the default license for PSI.
3. Legislation.gov.uk which was launched in 2011 as the public access tool to legislation. It enables the update of the official statute book at no extra cost, connects people writing

legislation to people using it, and rewire government and parliament processes for registering, laying and publishing Statutory Instruments.

Kingdom of Saudi Arabia (KSA)

In 2011 KSA launched its governmental portal [9]. The portal gives an overview about the kingdom in terms of the ruling system, custodian of the holy mosques, the Saudi and foreign embassies, and the environmental and wildlife. The portal offers data about various aspects in KSA under the title of “Open Government Data” such as the following:

1. Weather Conditions,
2. Prices and Indices
3. Social Insurance,
4. Trade (internal and external)
5. Education and Training
6. Social Services
7. Agriculture and Fishing
8. Population and Housing
9. Accounts Financial Monetary Affairs and Industry
10. Health
11. Energy and Water
12. Transport and Communications
13. Labor Market Industry
14. Arab Gulf Cooperation Council (GCC)

The portal introduces as well a number of government services as e-services and mobile applications, projects and initiatives (including national plans), acts and bylaws, and a directory of the government agencies. It was noted that the portal needs more elaboration on the government internal operations, women’s access to education, and the working conditions of foreign laborers [10].

Malaysia

Malaysia did not establish a governmental portal; meanwhile the Prime Minister interacts with citizens through the “1Malaysia” portal [11]. The 1 Malaysia provides information about the progress of economy, the initiatives, the political transformation, and the global leadership. It is used as well as a means of engagement between the government and citizens where the Prime Minister uses to direct messages to citizens such as the following introductory message:

“1Malaysia is intended to provide a free and open forum to discuss the things that matter deeply to us as a Nation. It provides a chance to express and explore the many perspectives of our fellow citizens. I hope this website will initiate an open and vital dialogue exploring our Malaysian identity, our purpose, and direction”.

It is worth mentioning as well that 1.8 million RM is being invested to maintain the Facebook page of the ministry of tourism in Malaysia

India

The National Informatics Center (NIC) of India launched the Indian governmental portal in 2012 through a joint initiative between the governments of India and US [12]. This portal was developed to provide single-point-access to datasets published by various Ministries/Departments of Government of India. It also enables suggesting the kind of datasets the user wishes to see for further consumption. A number of datasets is currently available on it coming from different government departments.

The portal presents information about the Indian statistics and the agriculture, health, and developer communities. It also contains events, announcements, and a form for suggestions. The portal is a means to present some of the featured software applications that the visitor can use in the domains of agriculture, mining, tourism, and others. A distinguished visualization gallery is offered by the portal to demonstrate statistics about the banking sector and other related graphs. It was noted about this portal that the license of downloading the available data "Terms of Use" was unclear [13].

In 2014 NIC launched the new version of the Indian platform "Open Government Data Platform v2.0" with a unified interface and more than 6000 open government datasets aiming to provide a better web experience to both data providers and platform users. The main improvements in the new version are the responsive web design, the better discoverability of resources, the enhanced visualization tools, and the adoption to enable SMS and e-mail alerts. An official twitter account for India's open data initiative (Data Portal India) is used to strengthen the community engagement with the platform [14].

Jordan

The Jordanian e-government strategy 2014-2016 published in April 2013 tackled the Open Data concept [15]. The strategy considered knowledge as a power where Open Data is an invitation to citizens to provide feedback to the government. This will contribute to policy making and shaping the service delivery design. Also, Open Data is seen by the strategy as not only enhancing transparency but enabling entrepreneurs and NGOs to use this data to produce non-governmental services that cater to targeted segments of society especially vulnerable groups, PWD, chronic diseases patients, and the unemployed.

The Jordanian governmental portal [16] included many of the data and statistics for the years 2010 and 2011 regarding various government ministries and agencies. Some of them exist under the title "Open Data" such as the following:

1. Agricultural Producers Price Indices 2010
2. Agricultural Producers Price Indices 2011
3. Area by Region and Governorate 2010
4. Area by Region and Governorate 2011
5. Central Government Domestic Revenues
6. Construction 2010
7. Construction 2011
8. Consumer Price Index 2010
9. Consumer Price Index 2011
10. Decided Cases 2010
11. Decided Cases 2011

12. Electricity Consumption 2010
13. Electricity Consumption 2011
14. Equipment For Wastes Collection and Transport 2010
15. Equipment For Wastes Collection and Transport 2011
16. Estimated Population by Governorate
17. Estimated Population by Governorate and Sex 2010
18. Estimated Population by Governorate and Sex 2011
19. ICT in households survey_2012
20. Indicators of National Accounts 2010
21. Indicators of National Accounts 2011
22. Indicators of Social Security
23. Indicators of Social Security 2010
24. Ministry of Health Annual Statistical Book 2011
25. Mortality data in Jordan 2009
26. Number of General Crimes by Governorate 2010
27. Number of General Crimes by Governorate 2011
28. Number of Visitors of Museums and Archeological Sites 2010
29. Number of Visitors of Museums and Archeological Sites 2011
30. Percentage Distribution Of Employed Jordanians Age (15+) years by Employment Status and Sex 2010
31. Percentage Distribution Of Employed Jordanians Age (15+) years by Employment Status and Sex 2011
32. Percentage Distribution Of Employed Jordanians Age (15+) years by Occupation 2010
33. Percentage Distribution Of Employed Jordanians Age (15+) years by Occupation 2011
34. Percentage Distribution of Jordanians Employed Age (15+) years by Economic Activity 2010
35. Percentage Distribution of Jordanians Employed Age (15+) years by Economic Activity 2011
36. Percentage Distribution of Jordanians Age (15+) Years by Educational Level and Sex 2010
37. Percentage Distribution of Jordanians Age (15+) Years by Educational Level and Sex 2011
38. Population by Sex 2010
39. Population by Sex 2011
40. Selected Communications and Information Indictors 2010
41. Selected Communications and Information Indictors 2011
42. Selected Health Indicators 2010
43. Selected Health Indicators 2011
44. Selected Indicators 2010
45. Selected Indicators 2011
46. Selected Indicators of Societies and Syndicates 2010
47. Selected Indicators of Societies and Syndicates 2011
48. Selected Tourism Indicators 2010
49. Selected Tourism Indicators 2011
50. Selected Transport and Communication Indicators 2010
51. Selected Transport and Communication Indicators 2011
52. Selected Vital Indicators 2010
53. Selected Vital Indicators 2011

- 54. Summary Of central Government Budget
- 55. The Kingdom's Area By Topography 2010
- 56. The Kingdom's Area By Topography 2011
- 57. Unemployment rate

The portal presents other information about Jordan history and geography, the royal family, and the Jordanian government agencies. Some of the governmental e-services are also available along with the media center and the FAQs section on the same portal.

United Arab Emirates (UAE)

The UAE governmental portal [17] clarifies the OGD policy of UAE through the following message: *“The UAE Government has adopted the Open Data practice to make government data and information seamlessly available to people. Under the Open Data, information is made usable, reusable and accessible to the public”*.

The portal offers a range of national data, governmental data, government applications, and data FAQs. The national data is categorized as economic statistics, demographic and social statistics, and agricultural and environmental statistics. The government data section links the user to the UAE resources of open data such as The UAE's National Bureau of Statistics, Statistics Centre – Abu Dhabi, Dubai Statistics Centre as well as all the UAE ministries portals. Other governmental agencies portals are linked to this portal under the government data section such as Emirates identity authority, federal authority for nuclear regulation, general authority of Islamic affairs and endowments, general civil aviation authority, national qualifications authority, securities and commodities authority, the supreme council for national security national emergency crisis and disasters, management authority, Emirates transport, marriage fund, and zakat fund.

Some of the applications that can provide governmental e-services are available on the portal for different IOS types. The data FAQs section demonstrates the type of open data that can be found on the portal, how to access, and how to use as well as the means of contributing to the portal.

EGYPT PSI & OGD

Over the last decade the Egyptian government made remarkable efforts in the field of availing PSI including striving to issue the data exchange law in addition to having a large number of the ministries and governmental agencies now sharing their related data on their own portals. And meanwhile the Egyptian Ministry of Communications and Information Technology (MCIT) strategy for the e-Content nominated following three initiatives related to the government content:

1. The Open Government Data Content
2. The Real-time Government Data Content
3. The OGD Pilot.

Nowadays many ministers and officials as well maintain Facebook pages and Twitter accounts to post their opinions to public [18]. Distinguished examples are the following outlets:

The Egyptian Government Portal

This portal is linked to most of the Egyptian ministries portals and it announces the Open Data initiative through the following message “*The purpose of Egyptian Open Data initiative is to make data publicly available and visible*”.

Open government data will ultimately enhance transparency and improve accountability as well as improve citizen involvement and participation. It is the initiative's role to avail data in forms that make it possible for users to analyze and create value from public sector information”. Examples of the Open Data that can be publicly available through this initiative are presented on the same page such as the following:

1. Links to results for the March 2011 referendum
2. Results for first round of the 2012 presidential elections
3. Results for the 2012 presidential elections runoffs
4. Results for the 2012 constitutional referendum
5. 2012 constitutional referendum voters’ distribution on polling stations.

The Portal of CAPMAS

CAPMAS is the Central Agency for Public Mobilization and Statistics and was established in 1964 as the official source of data and statistical information collection, penetration, processing, and dissemination. The CAPMAS portal provides information and statistics about a variety of domains such as telecommunication, social services, industry, workforce, housing, population, economy, etc.

The Portal of IDSC

IDSC is the Information and Decision Support Center that belongs to the Egyptian Cabinet. Their portal was mainly designed to be the “Think Tank” for the Egyptian Cabinet and to support the decision making regarding economic, social, and political issues. It strives to engage citizens through its communication channels to disseminate information and to measure selected attitudes of the society towards national issues. Many reports about economy and society are made available through this portal.

The Portal and Facebook Page of Supreme Council of Armed Forces

The portal and Facebook page both present the communiques in Arabic language and allows for subsequent comments by Facebook users

Facebook Pages and Twitter Accounts for the Prime Minister and the Cabinet

These pages and accounts followed the same approach of the Facebook page of the Supreme Council of Armed Forces

Egypt’s Government Procurement Portal

It displays information about ongoing and closed tenders and has received the 2nd prize from the United Nations in the category of “Preventing and Combating Corruption in the Public Service.”

The Egyptian Official Journal

It is issued weekly (every Thursday), and can be issued exceptionally in case of urgent decisions. It is dedicated to publishing the decrees of the President, and that of the Prime Minister delegated by the President, as well as other categories of important official decrees and decisions to be effective.

The Egyptian Incidents Journal

It is issued daily and dedicated for the decrees of the Prime Minister, Ministers, Governors, and other similar important decrees and decisions to be effective.

PSI & ODG BENEFITS

The OECD working paper [6] nominated a number of benefits that lies in the political, social, economic, and other domains as follows:

Political Benefits

Improving government accountability, transparency, responsiveness and democratic control: OGD is a main promoter for transparency and public accountability, meanwhile the absence of Open Data allows the public servants to be engaged in corruption with impunity. Availing information for analysis, processing, and combination enable another level of public scrutiny. This consequently increases the level of public trust, and the perceived responsiveness of government actions.

Social Benefits

Promoting citizens' self-empowerment, social participation and engagement: OGD enables citizens to take better decisions in their lives regarding finance, healthcare, energy consumption, and other personal contexts. It also leverages the level of their participation in public affairs such as policy making and services design and delivery. OGD supported by the Web 2.0 and Social Media technologies enabled citizens to be contributors and designers in their own rights which mean that they are invited to be share a participative and empowering relationship.

Economic Benefits

Creating value for the wider economy: Commercializing the government data can generate a huge income especially if reducing the charges of commercial re-use and allowing the cost of non-commercial re-use to be "zero". This would increase the use of OGD and its direct and indirect applications which will generate more revenues and more job opportunities in new sectors. Recent economic analysis showed that individuals, developers, and private enterprises are more likely to create and market some value added products based on the available OGD and the related pricing. This would increase the volume of the private sector, contribute to the national GDP, and provide revenue to the government in the form of taxes.

Other Benefits

Building the next generation of empowered civil servants, and empowering the public sector workforce are of the benefits of OGD initiatives. Opening up the government data enable civil

servants to develop applications that better respond to user needs. This is in addition to fostering innovation, efficiency and effectiveness in government services since OGD has the potential to increase government efficiency, effectiveness, and innovation in service delivery and internal public sector operations. Moreover, the use of technology and data analytics within the public sector, and the integration of analysis in policy making and design of public service can boost more integrated and innovative service delivery. This can not only result from the re-use of data by private sector actors or by civil society organizations, but also thanks to the re-use of data by civil servants, who have in several instances taken the initiative to develop new mobile applications.

International Indices Enhancement

The Web Index is a unique annual ranking of countries on the progress and social utility of the Web [27]. This Index showed that there is a strong correlation between the country general income and the extent of Internet usage inside it. The Index suggests that countries with higher general income have higher Internet usage levels thus more significant impact of open government data on governments' efficiency in operations, public transparency, accountability and environmental sustainability. Also, it revealed that the demand and supply of OGD is more present in higher income countries [28].

The Economic Freedom Index measures ten components of economic freedom, assigning a grade in each using a scale from 0 to 100. Five out of ten 10 countries leading the Economic Freedom Index also find themselves in the top 10 of the Web Index (Australia, New Zealand, United States, Switzerland, Canada). This index also shows that countries with higher Index of Economic Freedom, have friendlier enabling economic environment for OGD release and re-use.

The Corruption Perception Index (CPI) issued by Transparency International [29] scores countries by how corrupt their public sectors are seen to be. OGD is believed to increase transparency and accountability, presumably, levels of corruption in a particular country can also be relevant. It has been widely accepted that levels of perceived corruption negatively affect business environment, social and political climate in a country.

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