Open Government Data for Sustainable Development: The Case from Developing Countries in Asian Region

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Abstract
The modernization of public sector processes with an improvement of citizen-government relationship has given birth to a new phenomenon in recent years known as Open Government Data (OGD). Since 2009, primarily in Europe and many developed countries are notable moving towards Open Government Data Platform. Recently, some developing countries have also successfully implemented the OGD. However, only few researches have been conducted to identify the impact of OGD on socio-economic development in developing countries, particularly developing countries in Asian region. This research contributes to an analysis through secondary data of 10 Asian developing countries to discover the ways that facilitates towards public transparency and accountability. The paper illustrates an overview of OGD initiatives and their impact on socio-economic development. Reviewing many aspects it is found that citizens of India, Indonesia, South Korea and Philippines are benefited by using OGD. It is also found that poor data management and inactive participation of citizens in access to data are found as the major blockades towards the success of this initiative.

Keywords: Open Government Data, Developing Countries, Development.

1. Introduction
In recent years, Government of different developed and developing countries have started to display their data on the web. This initiative allows user to access the required data without having any limitation (Janssen, 2011). The main objective of this activity is share open data with users without any hindrance and ensures the transparency & sustainable development of the nation. On 20th January 2009, Barack Obama at an official level signed a Memorandum on Transparency and open Government. There he states: ‘My Administration is committed to
creating an unprecedented level of openness in Government. We will work together to ensure the public trust and establish a system of transparency. Openness will strengthen our democracy and promotes efficiency and effectiveness in Government.’ (Coglianese, 2009). Like as developed country, developing countries have implemented the open government data program and received both positive and negative feedback from various stakeholders.

Open Data are those that are completely free from concealment, distributed for public access and commissioned by governments or public sector. Since government information is a valuable national asset, opening it up for public access is fundamentally more about making the proficient use of resources and improving service delivery for citizens (Janssen, 2012). The concept is not relatively new but due to some security, privacy and other concerns countries legally limit themselves to share the information with public. Numerous developed countries like – UK, USA, Sweden, France, New Zealand, Norway, Canada, Australia, Germany and developing countries like- Indonesia, India, Philippines, South Korea have taken the initiatives to implement OGD for their sustainable development. The goal of this research is to contribute to an analysis of some Asian developing countries to understand whether their provided datasets portals facilitate citizen or not.

2. Methodology

The research methodology of this study is qualitative in nature. Data portals of each country are looked over to find the underlying patterns and insights. Various journals, newspapers, websites, and news related to the Open Data Government platform of each country are also analysed to find their impact on their citizens.

3. Open Government Data

Open Government Data is considered when data are disclosed and made available for reuse towards public without restrictions (Ubaldi, 2013). Here Data are budgetary info, parliamentary records, laws, geographic data, national statistics, business data and others. Lathrop and Ruma (2010) describes open government as “the right of people to access the proceedings of data”. The open Government guide developed in 2013 uses Transparency, Accountability and Public engagement to implement Open Government in large scale.

To promote transparency through data publications allowing accountability of public
officials therefore re-uses concealed data for social and economic value is one of the major goals of Open Government Data (Lindersand Wilson, 2011). Open government is closely related to e-government which is an extensive analysis and utilization of information and communication technologies among stakeholders (Wilson and Linders, 2011). Opening up data enables the citizens to view the activities of government, make them accountable for the actions for example, spending of national budget. It also helps to develop different applications for example, real-time traffic information, finders of locations of Schools, Public Toilets, and weather information which influence the life of citizen positively.

The ‘data.gov’ portal, OGD platform, is a centralized access point of data. It simply changes the views of citizens and researchers on accountability related data. The purpose of data.gov is to reveal all types of data from all public agencies and entities. It was created by US Government which operates under the open government principles and objectives including transparency to support public accountability. This portal inspired the creation of similar portals around the world that adopt the ‘data. Country’ addresses format and designation, and may therefore be considered as serving the same open government objectives. These are 10 Asian ‘data.gov’ type portals, targeted for analysis in this paper.

4. Open Government Data Initiatives in Asian Developing Countries

Open Data has become a new phenomenon in Asian countries in recent years and its relevance is likely to increase in coming years. The reasons given for open data are accountability, participation and citizen engagement. In this section, a small description of Open Data Platform in 10 Asian Developing countries is illustrated. According to the Open Data Barometer 2015, India, Philippines are considered as emerging and advancing country whereas Indonesia, Myanmar has capacity constraints and Malaysia is stood by a one sided initiative from Open Government Data perspective (Davies et al., 2015).

**India**

National Data Sharing & Accessibility Policy in India is designed to share all the non-sensitive government data for national planning and development. This policy mandates each departments to prepare its negative lists where all the confidential datasets that are sensitive towards the country’s security. This datasets need to be complied and sent to the Science and
Technology Department. Data regarding population consensus, Economy Survey, Budget Planning, and Income Tax Collection are highly specified in Open Government Data platform www.data.gov.in. High value datasets are prioritized and it must be free from legal issues, accurate and quality standard. Moreover, citizens can free to express and rate the datasets/apps according to its quality, accessibility and usability. Discussions around various datasets, apps through online forums, blogs are also available (Misra and Mishra, 2015).

**Indonesia**

On September 2014 Indonesia launched the http://opengovindonesia.org/en/ platform in collaboration with World Bank and civil society group to encourage the data transparency. This offers around 700 sets of data from 23 government institutions. Jakarta; an active data community has recently hold Jakarta open data challenge (Hackjakatara) using public transport and city budget data (Ritter, 2014). Beta version open data portal, http://satupemerintah.net/, launched in 2012 and statistical data in an open format is published by BadanPusatStatistik (BPS-Statistics Indonesia) in www.bps.go.id. Indonesian Centre for Environmental Law predicted that citizen engagement and accountability mechanism would decrease social conflicts and environmental risks

**Jordan**

Jordan introduced the open government data in 2011 to reform their plans and address the challenges about improving public services, increasing public integrity and more effectively managing public resources. They are the only Arab nation who introduced this system to ensure good governance (Frey, 2014).

**Korea**

South Korea launched an Open Data Portal, www.data.go.kr, in 2011. Korean’s Government 3.0 plan that promises to provide a wide range of public access along with a promise of a “Creative Economy” nearly extended the scope of data releases from 16% to 60% in areas like- Finance, transport and welfare(Nam, 2013). Open Data Policy Under ‘Creative management & Management Office’ formulates policies on Creative government. Through collaboration and administrative systems it simply promotes administrative efficiency enabling
access to public information. Seoul Open Data Plaza (data.seoul.go.kr); an active site which is managed by the Metropolitan government of Seoul provides information regarding diverse business opportunities mostly in IT industries.

**Laos**

Laos is one of the poorest countries in Asia with largely corrupted and non-transparent in nature. Though the website of the Ministry of Planning and Investment (www.investlaos.gov.la) has bit improved after joining WTO in 2013, still outdated information along with non-functional websites are keeping it in limited use. Mekong River Commission (MRC) (http://portal.mrcmekong.org/) which is an intergovernmental organisation has been considered as a catalyst for five countries (Laos, Cambodia, Thailand, Vietnam, and Myanmar). It provides spatial, non-spatial, technical documents, time series and many more data for local/international, academic/commercial as well as general public. However its complicated system of pay barriers makes it difficult to the data users.

**Malaysia**

Malaysia’s data.gov.my site lists 367 datasets from 17 ministries. Malaysia included in Open Data Barometer and currently ranked 41 among 86 countries (Gurstein, 2011). Malaysian Ministry of communication and Multimedia commission has aimed to enhance government’s ability to make decisions on facts. While in 2014, IT and Internet bills encourages all ministries to identify data in core services for the implementation of Open Data. Malaysian Sinar project, which is a volunteer run organisation, make information regarding budget expenditure and assets of political and parliamentary bills available to citizens.

**Myanmar**

In September 2014, Myanmar became a signatory to the International Aid Transparency Initiative. The World Bank knowledge Economy Index ranks it as second lowest countries among 157 countries relating to Innovation, economic development, ICT and others. Myanmarsdata.worldbank.org/country/myanmar portal Updates Global Economic Monitor Data and the World Bank projects on daily basis and operations along with some economic and financial data on Monthly or quarterly basis.
Philippines

The country launched its data portal in 2013, http://data.gov.ph/. It states in its homepage: ‘Openness inspires trust with is the foundation for a genuine partnership.’ According to the National Open Data Action Plan 2014-2016, the goal is to empower citizen decisions while encouraging transparency and efficiency in government. Philippines are worldwide renowned country where internet penetration is around 30% and the demand site for open data is well developed (Hogge, 2013).

Taiwan

Taiwan developed its open data portal (www.data.gov.tw) in 2011 that provides 2000 datasets (May 2014) including data from different cities and provinces in the country over. In 2013, it founded a new platform between government and user data known as Open Data Alliance. The Taiwanese Minister of Science & Technology, Chang San-cheng signed an agreement on collaboration between Taiwan and the UK Open Data Institute stated that ‘Open Data can improve the transparency of government and improve citizen participation, which is needed in Taiwan to resolve various kinds of environment and economy issues. Open Data can help Taiwan not only be seen by the world, but also unlock potential economic values and enable Taiwan's companies to go global.

Thailand

ICT development policy framework or ICT 2020 for the year 2011-2020 is an outline for e-government policy on developing Smart public services. Smart Thailand towards digital Economy that talks about ‘paradigm shift in smart era’ is the most recent update of this initiative. Initiatives are taken to create open data portal http://data.pm.go.th/ under Prime Minister Office and opendreamhttp://opendream.co.th/.

Open Government Data for Sustainable Development

India

Wright et al. (2010) describes the benefit of having open government data in India. Since 2010, farmers of Maharashtra are able to access in the government website and address the precipitation data, outbreak of different diseases of crops, necessary action and others.
Moreover, private organisations facilitate farmers by disseminating necessary information in form of short messaging system (SMS) to their mobile. Various private organisations used open government data platform to earn revenue. For example, training organisations use the open government data to address the training deficient area or sector and arrange workshop, seminar and training as required. In South India, access to information through mobile phones helped fishermen sell their catch at the market where the price was highest and fish most demanded. Fishermen were empowered by technology to make informed decisions on how to trade.

**Indonesia**

A mobile application named as “Jakarta Flood Alert” is developed by Fauzan Helmi Sudaryanto of University of Indonesia, which allow user to monitor the precipitation data and identify the flood risk during the monsoon season in Indonesia. This application assists user significantly as farmers and rural dwellers easily able to identify the potential risk through mobile and prepare themselves for such unwanted natural phenomena. Another user friendly website is made by Andhika Nugraha, a student from Bandung Institute of Technology which narrates the demographic information of Indonesian city. Open Government Data facilitate both of these developments as Indonesian government is publishing and updating the necessary information in website since 2014.

**Jordan**

Jordanian ICT ministry encourages the private sectors to use open government data and disseminate the information to their citizen. As a result, private sectors especially telecommunication companies send SMS regarding different awareness and campaign program to their consumers. Additionally, they reply to their user’s query regarding different governmental issue. To reply the query, open data of Jordanian Government is used by these operators.

**South Korea**

Farmers and fishermen of South Korea have access to government website to address the weather report, current demand of product and price. This initiative reduces the waste of product and price stabilization. Moreover, numerous private organisations have developed a
variety of mobile applications, which enable farmers and fishermen to get latest information about the product, associate challenges and possible remediation process. Additionally, farmers can text their questions to the service providers and get advice instantly. Korea’s online channel (Seoul open Data Plaza) enables its users to access real time bus & subway schedules, locations of public Wifi, facilities for disabled people and so on.

Laos

Laos country profile give the views access to bank finances, surveys and climate change knowledge portal. Dynamic social and economic changes in Laos during the recent time have created openings the government data.

Malaysia

myGov Mobile apps for example: my health, provides information on health risks and facilities. KPDNKK app ensures smart consumerism that contains information on prices for controlled items directly link to the Malaysian consumer Tribunal. Citizens can access information on public transport through SPAD app. Malaysian informative Data Centre is a one stop Centre for social data on Malaysia where data includes Industrial, Monetary and Banking, Education, Balance of Payments and others.

Myanmar

OGD implementation boosts private sector investment in Myanmar since 2013. IT service provider Infosys provide six months training to student of different universities and enable students to use OGD to develop helpful applications. All global tech companies are preparing their investment plan and few of them have already coupled with civil society and education institute to use OGD for the betterment of Myanmar citizen.

Philippines

Sakay.ph is an initiative developed by Philippine organisation, which enables commuters to travel information. Traveller can download this mobile application and travel easily through Philippine. This mobile app use OGD of Philippines. By OGD, telemedicine services for Maternal Health and Child Care are developed which allow user to address maternal
health issues and attain MDGs. Watching over Mothers and Babies (WOMB) is a patient monitoring system to monitor and track aggregated information about maternal health and child care services and outcomes. Different stakeholders are able to access into this system in order to craft relevant health plans and programs.

**Taiwan**

Data advocate T.H. Schee lists almost 230 events that improved communication among public sector and wider civil and business society. Taiwan’s most of the datasets relates to disaster response and prevention.

**Thailand**

Thailand’s Open dream in association with UNESCO developed numerous apps and games on health data, flood mitigation. Government information is freely available is a foundation concept of democratic systems in Thailand.

5. Conclusion

Open Government is built around government and citizen partnership. Today, there are a number of member countries that utilizes web to provide comprehensive information to stakeholders. Indonesia and Philippines have better governance but low transparency and discrepancy exists between their ambitions and reality. Countries like, Laos, Myanmar are still lagging behind of capacity for digitizing public services. Taiwan and Korea stresses innovation and development in ICT solutions whereas Thailand and Malaysia possess low information openness. It shows lower trust level between their government and citizens thus resulting in low progression in open government data platform compared to other developing countries. ‘Open Data Readiness’ as desired by world Bank are still very far too achieve since Institutional, regional development across the developing countries are very weak. From the user’s perspective, inappropriate datasets are major barriers. Moreover cooperation among government entities needs strong top management and political support. Open data has many opportunities and capabilities so here a pre-requisite is just to have a planned data management. It is undoubtedly a challenge for governments in Asian countries to develop policies and impose practices for data usage. Focusing on ICT and advocating technological rather than the societal
innovations hinder to understand the necessity of such open data. So, long term societal economic benefits of Open government need to be better understood.

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