A network diagram with numerous light pink nodes connected by thin lines, radiating from a central point. The nodes vary in size and are distributed across the page, creating a web-like structure. The background is white with a green horizontal bar at the top.

Open Data and Sub-national Governments:

Lessons from Developing Countries

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ACKNOWLEDGMENTS

The funding for this work has been provided through the World Wide Web Foundation 'Exploring the Emerging Impacts of Open Data in Developing Countries' research project, supported by grant 107075 from Canada's International Development Research Centre (web.idrc.ca). Find out more at www.opendataresearch.org/emergingimpacts





Open Data and Sub-national Governments: Lessons from Developing Countries¹

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¹The authors would like to acknowledge the contribution of Ilham Srimarga of Sinergantara in Indonesia and the research assistance of Madonna Thomas, Research Associate at the Chennai Data Portal Initiative.

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Abstract

Open government data (OGD) as a concept is gaining currency globally due to the strong advocacy of global organizations as Open Government Partnership. In recent years, there has been increased commitment on the part of national governments to proactively disclose information. However, much of the discussion on OGD is at the national level, especially in developing countries where commitments of proactive disclosure is conditioned by the commitments of national governments as expressed through the OGP national action plans. However, the local is important in the context of open data. In decentralized contexts, the local is where data is collected and stored, where there is strong feasibility that data will be published, and where data can generate the most impact when used. This synthesis paper wants to refocus the discussion of open government data in sub-national contexts by analyzing nine country papers produced through the Open Data in Developing Countries research project.

Using a common research framework that focuses on context, governance setting, and open data initiatives, the study found out that there is substantial effort on the part of sub-national governments to proactively disclose data, however, the design delimits citizen participation, and eventually, use. Second, context demands different roles for intermediaries and different types of initiatives to create an enabling environment for open data. Finally, data quality will remain a critical challenge for sub-national governments in developing countries and it will temper potential impact that open data will be able to generate.

Keywords: open data, developing countries, governance, sub-national contexts

Introduction

Open government data (OGD) as a concept is gaining currency globally due to the strong advocacy of global organisations as the Open Government Partnership. In recent years, there has been increased commitment on the part of national governments to proactively disclose information. This trend is significant especially for countries where right to information is not legislated and the only way by which citizens or their intermediaries will be able to access public data is through proactive disclosure by the government.

The arguments in favor of open government data are that they will unleash unlimited economic, social and political benefits. One report claims that the economic benefits of open data will amount to \$1 trillion coming from seven economic sectors alone (Manyika, et al, 2013). There are also claims that open government data has the potential to improve public service delivery (Granickas, 2013) and allow more opportunities for civic engagement, bringing citizens closer to their governments (Kucera and Chlapek, 2014). There is also a strong normative argument that opening up of government data and providing information to citizens through reusable formats would promote greater government accountability and transparency (O'Hara, 2012).

However, much of the discussion on OGD is at the national level, especially in developing countries where commitments of proactive disclosure is conditioned by the commitments of national governments as expressed through the OGP national action plans. Despite significant moves towards proactive disclosure at the national levels, one can observe that the debate on public accountability overall has been over shadowed by talk on data standards, software, digital architecture and the access and availability of information (Yu & Robinson, 2012). The focus on open government data at the national levels also glosses over the differences in the political, social, economic and digital divides that exist at the sub-national levels. The approach to being an “open government” seems to be eerily similar across several countries, and where “...the preparation and launch of open data initiatives follows an orthodox approach involving hackathons, training events and outreach activities” (Davies, 2014b).

In general, little is understood regarding the context, supply of open data, technical platforms and standards, governance setting, intermediaries, and actions and impact of open data³ in the context of sub-national governments – in provinces, cities, municipalities – of the developing world. In this context, the Exploring the Emerging Impacts of Open Data in Developing Countries (ODDC) project

³ For an elaboration of these analysis parameters, please see Davies, T., Perini, F., and Alonzo, J.M. (2013). “Researching the Emerging Impacts of Open Data – ODDC Conceptual Framework”. Available at <http://www.opendataresearch.org/sites/default/files/posts/Researching%20the%20emerging%20impacts%20of%20open%20data.pdf>

produced a significant amount of literature that will help us understand how open data springs, develops, and matures in the context of sub-national governments in developing country contexts.

This paper is premised on the assumption that the factors that facilitate the supply and demand of open government data at the sub-national levels influence and are influenced by the ability of citizens groups and civil society organisations fighting for more transparency and accountability of the processes and incentives of public institutions that are tasked to deliver public services. This paper is structured in four parts. The first part discusses a brief introduction of Open Data in Developing Countries project from which we take the analysis of this paper. In this part, we also discuss the research framework we used, the questions we wanted to answer, and the methodology for arriving at a qualitative summary of the findings from the cases. The second part briefly reviews the literature used as frames of analysis, more particularly in the context of decentralized governance. The third part summarizes the findings of the study, with particular attention on context, governance setting, and actions that hasten the emergence of open government data in sub-national contexts. The fourth part presents the conclusion and offers suggested actions for future open data work and research.

1. Background and Methodology

The Open Data in Developing Countries (ODDC) project is a multi-year, multi-country project that looks into how open data is used and is generating impact in the developing world. More specifically, it “explores how open data can foster improved governance, support citizens’ rights, and promote more inclusive development through looking at the emerging impacts of existing open data projects in developing countries” (Davies et al, 2013).

The project, with the support of Canada’s International

Development Research Center, funded a total of 17 case studies in Africa, Asia, and Latin America. At least 9 of these case studies focused on sub-national governments and in different thematic areas – sanitation in cities in Chennai, India; health service delivery and municipalities in the Philippines; urban slums and rural settlements in Kenya; open data and cities in Brazil, Argentina, and Uruguay; open legislature in Brazil, and budget and fiscal transparency in Brazil and the Philippines. A summary of the cases included in this study are presented in Table 1 below:

Country	Title of Study	Authors	Sector/Theme	Sub-national Area
India	The Quality of Civic Data in India and the Implications for the Push on Open Data	Shekhar, S. and Padmanabhan, V.	Health	Chennai (city)
Uruguay	Opening Cities: Open Data in Montevideo	Scrolini, F.	Urban development/ Cities	Montevideo (city)
Brazil	Open Government Data in Rio de Janeiro City	Matheus, R. and Ribeiro, M.	Urban development/ Cities	Rio de Janeiro
Kenya	Open Government Data for Effective Public Participation	Chiliswa, Z.	Poverty and slums	Nairobi (city)
Philippines	Exploring the Role of Open Government Data and New Technologies: The Case of the Philippines	Ona, S., Ulit, S., Ching, M., Hecita, I., Padilla, T. and Angeles, S.	Health and economic development	Bacolod, Bago, Iligan, Iloilo (cities)
Brazil	Open Data in the Legislative: The Case of Sao Paulo City Council	Matheus, R. and Ribeiro, M.	City governance – legislation	Sao Paulo (city)
Argentina	Opening Cities: Open Data in Buenos Aires	Fumega, S.	Urban development/ Cities	Buenos Aires (city)
Philippines	Opening the Gates: Will Open Data Initiatives Make Local Governments in the Philippines More Transparent?	Canares, M., De Guia, J., Arawiran, J. and Narca, M.	Fiscal transparency	Bulacan, Bohol, South Cotabato (provinces)
Brazil	Measuring Open Data’s Impact of Brazilian National and Sub-national Budget Transparency Websites and its impact on People’s rights	Beghin, N., Zigoni, C.	Fiscal transparency	Sao Paulo (city)

Table 1. List of Cases Reviewed

The primary questions that this synthesis paper would like to ask, drawing from these case studies, are the following:

- What context, governance setting, and actions hasten the emergence of open government data in developing countries?
- What facilitates or hinders the supply and use of government data in sub-national contexts in developing countries?
- What lessons can be learned from the cases in terms of creating and sustaining the supply and use of open government data in the sub-national-contexts of developing countries?

To answer these questions, more particularly questions (a) and (b), a re-reading of the nine cases was done in order to develop a comprehensive and complete list of responses to the questions. The list was coded and themes were generated from these coded responses. The answers to these questions will then be analyzed in order to come up with key themes that respond to the third question regarding lessons that can be learned to ensure better supply and use of open government data in sub-national contexts of developing countries. To synthesize the findings, a workshop was held at the Open Data Lab in Jakarta in February 2015 to write the preliminary draft of the research findings and results.

In a framework, the case study will proceed as indicated in Figure 1 below.

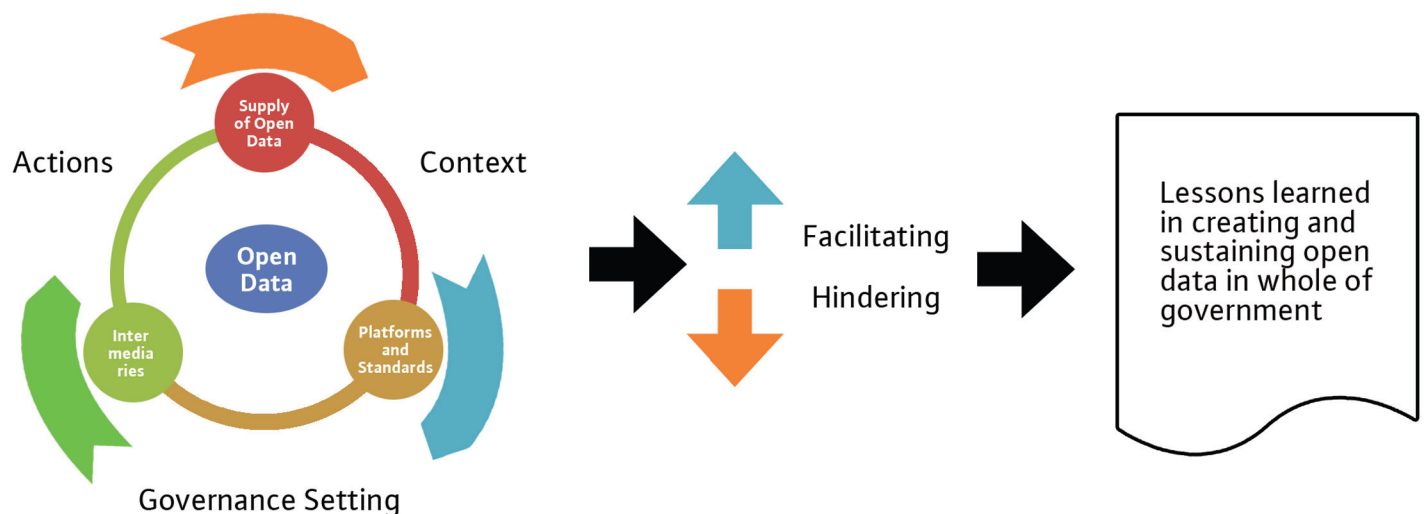


Figure 1. Research

Figure 1 above is adapted from the research framework of ODDC where;

- a. The context for open data – includes the political, organizational, legal, technical, social and economic context of the locality.
- b. The supply of open data – including data availability, legal frameworks for data, data licenses, and the stakeholders involved in providing data.
- c. Technical platforms and standards – including data formats and data standards used, and any data catalogues, APIs or analysis tools provided by an open data initiative
- d. The context of the specific governance setting – including a description and history of the issues in focus, details of key stakeholders, and analysis of how data plays a potential role in this setting
- e. Intermediaries and data flow – documenting the means by which data is made accessible in the governance setting: how, and by whom?
- f. Actions and impacts – documenting the experience of those seeking to use data, and providing evidence of intended or unintended consequences.

Each of these areas were looked into in the cases reviewed and the facilitating and hindering factors were identified in each of the components above (a to f), whenever possible and as the data of the cases would allow. As the synthesis is based largely on the research papers mentioned, the analysis of results is limited to what were provided in these documents. There was no opportunity to ask for more information from case authors, except for the Philippines and India papers whose authors also wrote these synthesis. Finally, a qualitative analysis of the themes in each of the elements was done to arrive at generalizations and conclusions.

2. Why the Local?

Decentralization, as an integral component of the good governance discourse, has been implemented in developing countries, pushed by different forces and actors in the last 20 years. For some, decentralization is a consequent effect of democratization, recognizing that representative governance can only work in contexts when local participation is assured (Stoker, 1996). For others, decentralization is pushed by the globalization phenomenon as more national governments acknowledge the limitations of centralized planning and management in dealing with more globalized challenges confronting nation states.

But in the context of developing countries, it is argued that decentralization, as part of the democratization process, is largely influenced by international agenda especially because of ideological shifts in the more developed economies and the international organizations working in governance reform (Mkandawire, 2006). The World Bank, for example, spent a total of USD22 billion between 1990-2007 in a sample of 20 countries for decentralization reforms (WB, 2011). However, the changing political dynamics and the challenges associated with it pushed developing country governments to also implement waves of decentralization reforms (Faguet, 2011).

Decentralization, therefore, is something we have to contend with in any context of governance program or intervention, open government data included. But it is important to define decentralization in this case. This paper takes Ojenda and Dellnas' (2013) definition that decentralization "generally refers to the transfer of powers and resources from the central

government to lower levels in the state hierarchy" (pp10). It can be a form of devolution (political or democratic decentralization), delegation or deconcentration (administrative decentralization) and fiscal decentralization. To date, almost all countries regardless of system of government have some forms of decentralization, whether political, administrative, or fiscal.

Open government data falls under the gambit of open government, that has transparency, participation, and accountability at its core (TAI, 2014). It requires that the public understands how their government is working, that the public has a say in governance, and that the public can call their leaders to account for its performance. In decentralized governments structures, this characterization extends to the local, where most of governance activities take place, where the relationship between the government and the governed is proximate, and where demand for public services exact accountability of elected leaders.

Focusing on the local has strong normative evidence. Those that have studied decentralization extensively in the last twenty years suggest that decentralization makes government more responsive to the needs of local citizens (Alderman, 2000; Faguet 2004), promote inclusiveness in development (Helmsing, 2004), and thus eventually leading to increased citizen satisfaction of government's delivery of public

services (Diaz-Serrano and Rodriguez-Pose, 2012). As such, focusing on the local in terms of ensuring openness in governance will make the impact of open government data more real to citizens as programs become more responsive to local needs, increase citizen participation, and thus improve citizen satisfaction with governmental services.

These results, however, are not automatic and a strong argument that decentralization does not result to these perceived effects was put forward by Grindle (2007) where she highlighted the tension between decentralization as a theoretical design and practical construct. Grindle argues that among the different hypothesis regarding how decentralization can work, electoral competition and political

entrepreneurship have the greatest effects on the quality of decentralized governance. So arguably, it is not decentralization per se that brings positive effects on the quality of governance but a whole myriad of factors including the complex interactions among political institutions, societal demands, and political stakeholders as politicians and citizens.

Like any governance reform program, this conclusion is but expected. Inarguably, development and change is not a result of one factor. In the case of open data for example, publication of open government data will also not lead to outright improvement in people's lives (Davies, 2014). Davies (ibid) argues that for open data to lead to outputs, outcomes, and impact, there are many factors to consider – how open data is used, how people are able to access technology, how committed leaders are, how much resources are put into open data initiatives, how active is civil society and other intermediaries in governance, among others.

A more recent review of decentralization reforms summarizes the major arguments how and why decentralization can work. Manor (2013) argues that decentralization can work only when there are substantial powers at the local level, matched with sufficient resources, and kept in check by institutionalized accountability mechanisms. This echoes Agrawal and Ribot's (1999) argument that efficient decentralization happens when representation and downward accountability is strong matched with countervailing powers to hold local powers accountable.

We take these views in framing the analysis of the different cases in this study. Indeed, the

local is important in the context of open data. In decentralized contexts, it is where data is collected, where data is stored, where there is strong feasibility that data will be published, and when used, it is where data can generate the most impact. However, the context of open data is also important. Questions on whether there is a strong regulatory environment for openness, whether there is a sustained demand and interest in government data, whether there are resources available at the sub-national government's level to harness the potential of open data are critical.

To further particularize this theoretical frame, and that of the research framework presented at Figure 1, we use three parameters of analysis as indicated in Table 2 below:

Facilitating/Hindering Factors for Open Data to Happen	Facilitating/Hindering Factors in Open Data Provision	Facilitating/Hindering Factors in Open Data Use
Context (political, legal, organizational, technical, economic, social)	Supply of Open Data (data availability, legal frameworks for data, data licenses, main stakeholders in data provision)	Demand of Open Data (who are those that demand for data?)
Governance Setting (how has data played a part in this governance setting)	Technical platforms and standards (Data formats, APIs, etc)	Access factors (what are the facilitating factors for access in terms of technology?)
Open Data Activities/Actions	OD intermediaries (which intermediaries hasten data supply?)	OD intermediaries (which intermediaries hastened data use?)

Table 2. Frames of Analysis

We wanted to look at the overall context which influences local power, local resources, and accountability mechanisms that eventually affects how open data can happen at the sub-national level. Then we looked at these three elements at both demand and supply side of open data. For example, intermediaries can be positioned as part of local accountability mechanisms. Technical platforms and standards as well as local legislation may define local power, while the condition of technology is

part of local resources. However, to streamline the presentation of findings, we will present the results using the major headings of the table above keeping in mind that success at the local level can only happen when two factors exist - "a bottom-up demand from citizens for accountable government closer to the people" and "top-down agenda aimed at improved governance at the local level" (Ojendal and Dellnas, 2013: 7).

3. Research Findings

3.1 What hastens open data at sub-national contexts?

Across cases, the primary driver of openness at the sub-national level is the presence of **national or local legal framework** promoting the same. The legislation sets the stage for civil servants at the local level to comply with the required standard of openness and paves the way for institutional sustainability. These laws can be about freedom of information (FOI), proactive disclosure, or open data. The countries covered by these studies have different legal frameworks for openness.

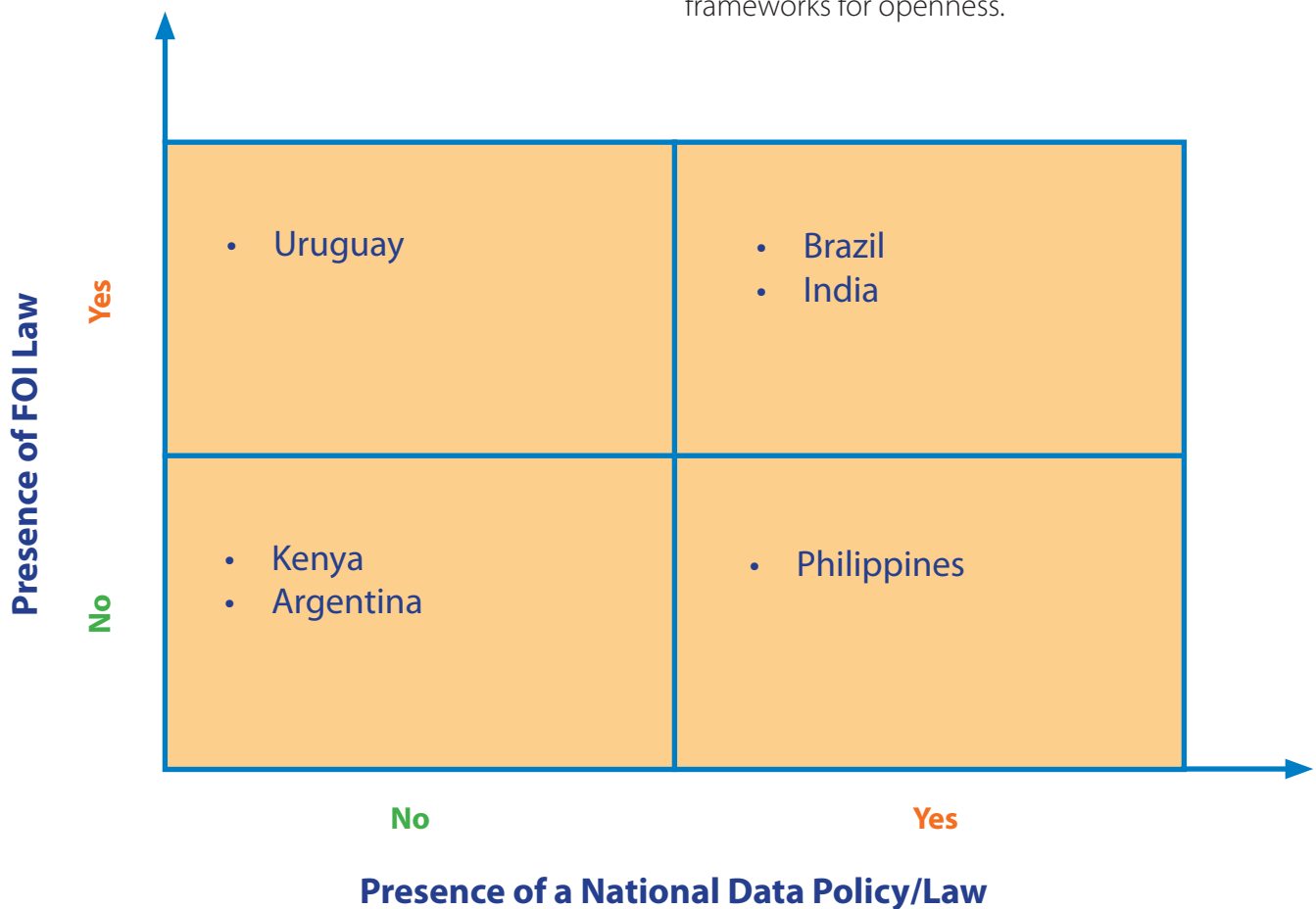


Figure 2. Countries and Frameworks for Openness

A major insight coming from these cases is that, while a national legal framework is critical, the absence of such is not a major hindrance in making data open to the public at the sub-national level.

There are countries with legislated Freedom of Information (FOI) law backed with policies that ensure proactive disclosure. For example, transparency law in **Brazil**, promulgated in 2009, requires all public entities to publish in the web detailed budget data in real time. The same law requires that by 2013 more than 5500 Brazilian municipalities must publish financial and budget data in its portal. Brazil also promulgated the Information Access Law in 2012, which is roughly equivalent to a FOI act. In this category belongs **India** which passed the right to information (RTI) law in 2005. In terms of open data, the country implemented in 2012 the National Data Sharing and Accessibility Policy (NDSAP) which was intended to promote data sharing and enable access to government data. NDSAP requires that government publish government data in re-usable formats but targets central government specifically. There is no similar policy directing state-level governments to do the same.

There are countries where the main basis for information disclosure is an FOI law, without any policy that promotes open data. For example, **Uruguay** passed the FOI Law in 2008. Despite deficiencies (e.g. like the lack of definition for what constitutes public bodies, for example) it is considered an achievement in the country's efforts to cultivate

transparency. Recently, Uruguay also passed the Free Software and Open Standards in the Public Sector. Though not necessarily an open data policy, it sets the stage for government preference of non-proprietary file formats. However, the city of **Montevideo** is purportedly the first city in Latin America with an open data policy.

There are countries without any FOI law but with policies or regulations that require proactive disclosure. In this category belongs the **Philippines**, which does not have a FOI law but only has the Full Disclosure Policy (FDP) issued by the Department of Interior and Local Government. The FDP requires local government units to disclose proactively certain types of data in their websites or at the FDP portal, a dedicated portal where LGUs can upload and citizens can access finance-related information. Despite the insufficiency in the number and type of data required to be publicly disclosed, this is considered a significant step in transparency, especially in a context where there is no FOI law. The provinces and cities studied in the two cases reviewed for this synthesis are compliant to this policy.

Finally there are countries without any FOI law and no national policy in open data or proactive disclosure like Kenya and Argentina. While **Kenya** enshrined in its constitution the right of citizens to information, the country does have its own FOI law. It also does not have an open data policy that governs the country's open data initiatives but had a heavily invested open data program called the Kenya Open Data Initiative. In the same way, **Argentina** does not have an FOI law or

any policy related to proactive disclosure.

Given these contexts, one can ask, why do provinces, cities, municipalities covered in this study, despite absence of legal framework, proceed with implementing open data initiatives? The question largely applies with the cases coming from Kenya, Argentina, and India. In Kenya, it was the effort of the ICT ministry of the country that launched open data initiatives despite the lack of a solid legal basis. But in Argentina, the case was very different – while the federal state does not have an FOI, the city of Buenos Aires passed its own. In India, as the NDSAP does not focus on sub-national levels of governance, the civil society organization pressed the Chennai city government to ensure information provision by working with government and building its own portal. The same thing also happened in Bahia Blanca, in Argentina, but it was government who initially developed a portal that was taken forward by a programmer by making the data from the portal more understandable by citizens⁴.

A major insight coming from these cases is that, while a national legal framework is critical, the absence of such is not a major hindrance in making data open to the public at the sub-national level, as the cases of Chennai in India or Buenos Aires in Argentina would suggest. But national laws and regulations are critical, especially in cases when other frameworks like the FOI are absent. Proactive disclosure in the Philippines only happened due to a policy that carries both rewards (e.g. the grant of the Seal of Good Housekeeping for compliant local government units) and sanctions (e.g. public officials who do not follow are administratively liable), because FOI is still debated on by legislators.

⁴<http://techpresident.com/news/wegov/24601/buenos-aires-pocket-civic-innovation-argentina>



3.2. What facilitating and hindering factors exist in open data provision?

There are six facilitating factors that exist in the cases which hasten the provision of open data. These are political leadership, implementation structure, readily available governance data, technical capacity, existence of intermediaries, and implementation of concrete initiatives. A positive condition of each is considered a facilitating factor while a negative condition is considered a barrier to realizing open data in sub-national contexts.

3.2.1. Political leadership

Like with any governance interventions, political

leadership is critical in data provision. In Buenos Aires, the chief executive serving his second term in office enacted a decree in open government that focused on proactive disclosure of data in reusable formats. In the provinces of Bohol and South Cotabato in the Philippines, the success of transparency efforts owed to the fact that governors of both provinces ran on a platform of transparency and committed its efforts towards this.

However, the Chennai case in India provides an antithesis regarding the high degree of importance of political leadership. With NSDAP focusing on national government apparatus and no law requiring sub-national governments to undertake proactive disclosure, it is civil society that compels governments

to improve data collection and does the function of community profiling on its own. In which case, when governments do not perform its role, civil society can hold it to account. This resonates with the experience of Nepal (not part of this synthesis) where the country's open data portal is not maintained by government but by a consortium of non-governmental organizations. However, it is important to highlight that the state of civil society and its extent of participation in local governance is a determining factor in their ability to take on the role that governments failed to play.

3.2.2. Implementation Structure

Even with the existence of a law or a policy, without the existence of a functioning implementation structure, no concrete results will be seen. In Montevideo, an Open Data Working Group was organized to undertake open data initiatives. In the case of Sao Paulo, implementation was spearheaded by the Sao Paulo City Council, the Department of Information Technology, and the Department of Communication. In Buenos Aires, the Office of Information and Open Government and the Ministry of Modernization did the implementation of open data projects. In the Philippine cases, the information and technology departments of the provincial governments ensure uploading of required documents in the FDP portal and the provincial websites.

Some local governments make use of decentralized implementation structures in the proactive release of governance data. In Buenos Aires, each agency in the city government is responsible for maintaining the data and authorizing its release. The Office of

Information and Open Government will seek the authorization of city agencies before publishing data in the portal.

Without implementation mechanisms and the corresponding allocation of human and financial resources, laws on open data action plans will never have any chance of implementation.

3.2.3. Availability of Governance Data

Sub-national governments that have certain degree of automation (e.g. data is collected and held in digital formats) in its data management systems will likely have more ease in proactively disclosing data; much more in sub-national governments that use highly sophisticated systems in managing data. In Rio, there were 1,200 data sets, 30 files in 13 categories. These data were habitually held in digital formats by the agencies dealing with education, environment, enterprise, social development, sports, taxes, tourism, among others. In the Philippines, compliance by local government units with the FDP was high at more than 80% when it was first implemented – made possible by the fact that data required to be disclosed under the policy come from financial systems with clear data collection, aggregation, and reporting procedures. Thus, disclosure is easy to do – no additional effort of digitization is required.

In several of the cases, provision of open data to the public usually started off with data that is readily available - data collected and held in digital form and in open format. This approach was seen as the best option to jumpstart open data provision. For example, the Full Disclosure Policy in the Philippines required local government units to disclose data

that they habitually prepare as spreadsheet files – budgets, procurement plans, and utilization reports. Publishing these datasets does not require significant effort on the part of civil servants, except uploading it in websites as a CSV file. In Montevideo, the city government decided to progressively disclose data in its portal, starting off with geographical and transport information. The government decided to use these data sets because these were the ones that were already collected and held in open format and can put the policy into motion in a shorter span of time.

3.2.4. Technical Capacity of suppliers

The availability of governance data that is ready for proactive disclosure is invariably linked to the technical capacity of sub-national governments. High technical capacity makes data provision easier. In Montevideo, the IT department of the city government has very high capacity, even with software development. This was a result of a long tradition of systems development especially in the human resource sector.

In Rio, technical capacity is high in both skills and IT infrastructure – they have sensors on street lights, GPS on buses, and a data center with skilled people set up by IBM. This facilitated the provision of real time transport data. However, in Chennai, this is not the case. The case study points to the almost non-existent technical capacity at the level of the bureaucracy – even manual data systems are plagued with data quality and timeliness issues. For example, when Transparent Chennai worked with the government to geo-locate public toilets, they found out that the data is not aggregated, in most cases outdated, and when available, these are not in open formats.

3.2.5. Presence of Intermediaries

However, government does not necessarily have to possess high technical capacity in open data. The Chennai city government, because of evident weakness in improving data quality, was aided by Transparent Chennai who worked with the government in raising the quality of health and sanitation data from within. Transparent Chennai used to avail of right-to-information requests to get government data that nevertheless had quality issues. Now, the organization has a Memorandum of Understanding with the city government to improve data quality and help solve real-world problems, like in the case of public toilets.

Intermediaries can also be from the business sector. When Rio de Janeiro city government decided to use data to better manage natural disasters as flooding,

The cases suggest that the initiatives where there is evidence of use are those where open data is used to address existing real problems faced by citizens.

after the heavy rains in 2010, it partnered with IBM to establish the Center of Operations – Rio de Janeiro, where secretariats of different city agencies collect, aggregate, and analyze geo-referenced information on several aspects in the city from rivers to transport condition. But intermediaries from the private sector can even act on their own even without the prodding of government. An independent data programmer in Buenos Aires created a public expenditure portal, enhancing open data provision.

Intermediaries also exist within governments. In the case of Argentina, intermediaries, referred to in the paper as policy entrepreneurs, caused the introduction of open data into the local and national policy sphere. In the Philippines, an internal audit office in a province made sure that the local government complied with the FDP by checking regularly the documents disclosed in the government website and reminding document owners regarding their responsibilities. This system was created to ensure that the local government will not miss in getting incentives (e.g. award for good local governance) and maintain its reputation as one of the best governed provinces in the country. The role of

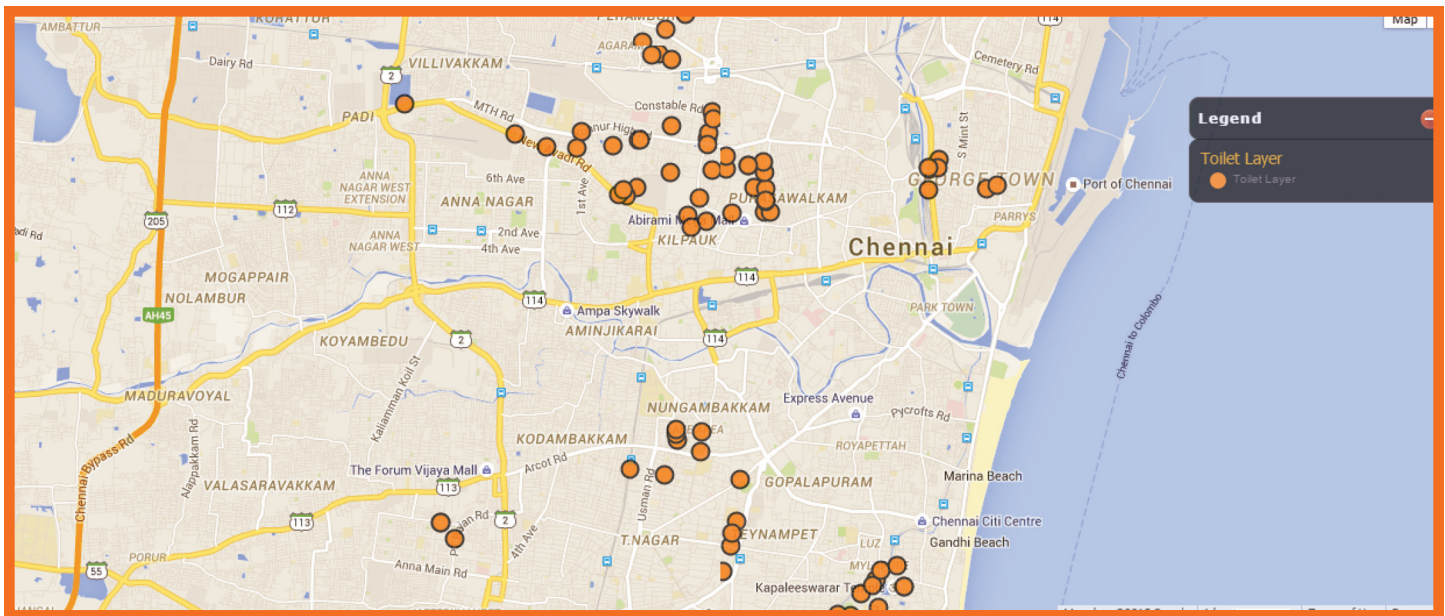
these intermediaries is critical in open data provision – however, more research is needed to ascertain their motivations.

3.2.6. Implementation of concrete initiatives

The true test of the functionality of open government data in sub-national contexts is the implementation of concrete open data initiatives. These initiatives can be classified into two – those that relate to open data provision, and those that relate to the promotion of open data use.

Most of the sub-national governments covered by this paper, except for Chennai, make use of portals to supply data publicly and proactively. The Latin American cities of Montevideo, Rio de Janeiro, and Buenos Aires each have its own open data portal. Kenya has a national data portal developed through the Kenya Open Data Initiative, but this portal also contains local data. The provinces covered in the Philippine case each have its own website where they also proactively disclose data apart from the FDP portal.

Several of the cases use hackathons as a way to increase data uptake. Sao Paulo, Rio, Buenos Aires, and Montevideo held hackathons based on sub-national data while in the Philippines, Kenya, and India, hackathons were held based on national data. There were other creative citizen engagement strategies employed in some cases. In Buenos Aires, they established Government Laboratory which is a physical space where various stakeholders discuss public-interest problems and work collaboratively to achieve solutions.



Public Toilets Map produced from the data collected by Transparent Chennai

3.3. What facilitates or hinders open data use?

The case studies showed at least four critical factors that hasten or prevent open data use. These are the existence of real-life problems or challenges to be solved, the quality of the data, technical capacity on the part of users, the existence of intermediaries, and the incentive and interest to participate.

3.3.1. Existence of real problem to address

The cases suggest that the initiatives where there is evidence of use are those where open data is used to address existing real problems faced by citizens. For example, in Rio, applications related to transport (e.g. Easy Taxi) and also one related to public toilets (“Loosening”) especially during the Carnival showed high data uptake. This shows that data use occurs when data provided relates to an actual issue or problem identified or articulated by citizens or governments.

In the case of the Philippines where majority of the data relate to public financial management, it is the business community that has the greatest uptake especially because procurement data is one of those that they use to anticipate government procurement activities. This also re-affirms the finding that open data does not only serve social purposes but also economic ends.

This paper argues that if data, regardless of whether it is open or not, serve political, economic, or social ends, it will always be sought by people who need them. Without any apparent need of a data set, despite the volumes that will be released, data use will not be a natural consequence of disclosure.

3.3.2. Data quality

But for data to generate use, data should be credible enough in terms of quality, and that users

trust the usefulness of the data. In the case of Chennai, because quality issues abound in the city government's health and sanitation data, Transparent Chennai decided to improve the quality of data from within than actually use it. Together with the city government, it improved data on public toilets so that government can proactively respond to the challenges.

In Sao Paulo, while initially the budget data provided was useful, the lack of disaggregation and detail affected people's interest in the data. *Cuidando do meu Bairro*⁵, a tool to monitor implementation of the city budget, was not fully implemented because the budget data is not geo-coded. While textual analysis of budget data was attempted, full analysis cannot be done when budget data is described in a generic way or presented in an aggregate manner.

3.3.3. Technical capacity of users

Without the capacity of users to access and make use of data, even when data provided is of sufficient quality and quantity, there is no data impact. In a context where internet penetration is low, citizens may prefer modes of accessing government data other than portals. In the Kenyan case, seventy-seven percent (77%) of respondents prefer to access information through the radio and less from government portals. In rural settlements in Kenya, besides radio and TV, they also prefer accessing information from traditional modes as church or mosques and also community centres. So it is naive to say that opening data and disclosing

them in portals will lead to actual use. The primary question is whether users have capacity to access data. Capacity may refer to different things in this case. This can refer to technical skills (explicit knowledge and methodologies), organizational capacity to function (in the case of organizations), and enabling conditions as laws, systems, and strategies (Pearson, 2011). In some contexts, one of the greatest barriers to data use is lack of technical capacity.

Capacity will be different at the level of organizations and at individuals. In some contexts, like in the Kenya and Philippine cases, capacity of individual users is significantly lower than the capacity of the organizations because often organizations have more resources. In Kenya, most citizens do not access government data and information from portals, but from intermediaries as local churches. Local churches have more capacity to access and understand publicly-disclosed government information. In the Philippines, organized groups, and not necessarily ordinary citizens, know that the government discloses information through its website and portals.

However, capacity of organizations is also differentiated; some organizations have more resources to access data compared with others in such a way that they are able to benefit from the data more. In the Philippine case, for example, business organizations with regular access to internet and have staff members who regularly monitor government's public disclosure of data were the ones who benefitted more. These businesses used government budget and planning documents to anticipate procurement opportunities that they could participate in within a local government's calendar year.

⁵ <http://cuidando.org.br/>

3.3.4. Existence of intermediaries

Given this context of lack of capacity, intermediaries which hasten open data use are important. An open data intermediary “is an agent positioned at some point in a data supply chain that incorporates an **open** dataset, is positioned between two agents in the supply chain, and facilitates the use of data that **may** otherwise not have been the case.” (Van Schwalk, et al, forthcoming). The definition positions the intermediary in the aspect of use than supply provision.

The cases covered by this synthesis show at least three things. First, intermediaries are critical to ensure data use, especially in contexts like the Philippines where awareness regarding the existence of the data is low, or when the capacity of users to make use of and derive results from data is limited. Second, the role of intermediaries is largely dependent on context. In Rio and Sao Paolo, the World Wide Web Consortium and Open Knowledge Foundation acted as hackathon sponsors. In Montevideo and Buenos Aires, civil society organizations, the private sector, and journalists play significant roles in developing applications, in increasing socialization processes for

open data, and in advocating for more transparency. In Chennai, Transparent Chennai simplifies data and conducts training for data suppliers and users alike. Third, data intermediary organizations need not be open data intermediaries. This is in the case of Kenya where local chiefs, community centers, churches, and mosques, provide as data intermediaries between governments and citizens.

3.3.5. Opportunity and incentive to participate

However, it is important that for citizens (or citizen groups) to actually use government data, they should be able to find the value to use the data to influence governance (opportunity) or improve their lives (incentive). Without the opportunity to influence and/or the actual benefit that would result from this participation, sustained use of data by citizens (or citizen groups), will not likely happen. For example, if citizens find that through engaging with government budget data, they can actually influence how social funds are being allocated and spent, and eventually be benefitted as a result of the process, they will likely sustain their level of participation in governance.

In the urban slums of the Kenyan case study, data on the number of bursaries awarded by government to students is the most sought after information. This information is important for parents in order to know how many slots are available and how likely will their children get one. This however relates more to incentive than to opportunity, as local citizens do not still see their ability to influence how bursaries are allocated or awarded. In Brazil, an organization called Centro Feminista de Estudos e Assesoria

(CFEMEA) continuously undertake budget analysis of the federal government to influence gender budgeting. This sustained process of engagement led to parliamentary amendments to the public budget, perceived to benefit more women in the process. While CFEMEA operates at the federal level, it highlights how opportunity to influence leading to a perceived benefit can lead to sustained use of open government data.

This affirms the findings of scholars in participatory governance who argued that citizens who feel that they have control over the resources of government have the higher incentive to participate in governance (McGee 2003).

4. Conclusion:

What Can We Learn from these Cases?

The cases covered in this review showed how open government data potentially unlocked economic, social and political benefits. City and regional governments have improved planning of transportation, electricity and other services. They have also enabled businesses to use government data to innovate on solutions to these governance problems. The case studies considered in this paper also demonstrate how national and sub-national governments have adopted similar approaches to open government data - one that rely on websites and portals to publish government data. However, upon closer examination one finds that the contexts of these developments differ vastly, as the discussions above demonstrate, as do the capacities of the governments and intermediaries involved. The cases highlighted three things, in this regard.

1. There is substantial effort on the part of sub-national governments to proactively disclose data, however, the design delimits citizen participation, and eventually, use. The legal context for each of these case studies is one where there is a legislation mandating access to information, either proactively or reactively. We see that the sub-national governments have made open data sets which can improve government efficiency and have potential social and economic benefits, such as data on bus routes and health services. However, we have also seen in several cases, the limited use of these data sets by people who have the power

to hold governments more accountable. The efforts to open data on gender and development in the Philippines and budgets in Sao Paulo aim to inform citizens about their governments but the ability of citizens to participate in decision making as to how these funds should be allocated and used seems to be limited so far. In the Philippines, while gender budgets are available online, this information was not widely disseminated thus women groups were not even aware that the budget information exists. In Sao Paulo, while budget data is publicly available, this does not contain the level of detail that people needed (e.g. geo-locating the budget data) so that they will be able to influence budgeting and spending of government funds.

The choice of what data to make available has been made by the government rather than by the people. There are limited examples where data and APIs as demanded by users were disclosed and provided by governments – like in the case of the hackathon in Buenos Aires and in the public workshop in Montevideo. In almost all the cases, **technology** has been used to make government data available. However, these governments have not used technology to bridge the gap between governments and citizens, nor to establish feedback loops that would be durable or could connect with hard-to-reach communities.

The intention and willingness of governments to engage citizens through data and make governance more inclusive and participatory is largely dependent on political leadership. The cases covered by this synthesis suggest that when political leaders are committed to disclosure and transparency, with or without the prodding of other actors within and outside government, open data initiatives can happen, attract the necessary resources, and generate results. This goes back to Grindle's (2007) argument that politicians acting within this new context have the ability and the power to shape governance patterns, processes, systems, and eventually outcomes. If political leaders will design open data initiatives in such a way that it is more demand-driven and relevant to citizen's needs, initiatives can potentially result to improved citizen participation in governance.

2. Context demands different roles for stakeholders and different types of initiatives to create an enabling environment for open data at the local level.

Political, organizational, legal, economic, technical, and social context will either support or undermine open data initiatives, especially at the decentralized governance environments. For example, national laws and pronouncements directing sub-national governments to disclose data are important, but without the technical capacity of government personnel to make this happen, this will not likely result to compliance. In the Philippine cases, the local governments studied were considered the best governed provinces in the country, thus the presence of implementation structures and responsibilities

to ensure compliance. However, in contexts where there is no law at the national level, capable governments with the vision and intention can make the open data a priority agenda, like the city of Sao Paolo in Brazil.

Before open data use can happen, open data provision has to take place. As earlier indicated, leadership is crucial, but this has to be complemented with available resources – technical, human, financial – as open data initiatives are not cheap. Sub-national governments with resources will find it easier to make proactive disclosure happen and generate results, but admittedly, this is not the case in all local governments in developing countries. The status of decentralized open data in developing countries brings back Manor's (2013) argument regarding the promise of decentralization. It can only work if at the sub-national level of government, there are substantial powers matched with sufficient resources.

Manor (ibid) also highlights one critical dimension for decentralized governance to work – institutionalized accountability mechanisms. While this can include structures within government like audit institutions and anti-graft courts, civil society organizations can also effectively hold government in check. While Manor (ibid) is skeptical about the importance of civil society, he acknowledges that in some contexts it contributes to the deepening of democracy in decentralized systems. Civil society organizations can intermediate democratic change, as what Cheema (2013) argues – bridging citizens and governments in a

process of negotiation and contestation.

In this case, context also determines the kind of roles that intermediaries will play. In the Latin American cases, it is observed that the intermediaries in the supply and demand for open government data have largely been technical experts, academia and journalists and their engagements have been directly with sub-national governments. Reports and manuals that were prepared to explain how to access and use the data portals were done keeping hackers and the technical development community in mind.

In contrast, the intermediaries in the African and Asian cases have been civil society organisations that work on frontline public service delivery and with communities. In the case of Kenya, India and the Philippines, we see that the intermediaries expended their own resources to access data from the government - either from online sources or hard copies from government officers, and to transform those data into forms that could be useful for the advocacy by the communities they worked with. This reflects the low levels of access and literacy of the communities that the intermediaries work with, but this highlights the need for OGD initiatives to be designed for such social and economic contexts.

3. Data quality will remain a critical challenge for sub-national governments in developing countries. These cases signal that opening government data or open government initiatives do not necessarily or automatically translate into improved service delivery or enhanced

transparency and accountability. While there are several ways in which open (government) data can “enhance democracy” - among others, to control corporate lobbyists, fight corruption, and hold politicians to account, these are premised on the availability of complete, accurate, updated, and open data. However, the overarching concern in most developing countries is the **extreme poverty of data**. Yet, those that have the potential to improve equity of access to basic services, such as water, sanitation and health, remain inaccessible in open formats. In several of the cases, the “easy-to-disclose” data are the ones that are being proactively disclosed. The lack of transparency and accountability in some contexts can be attributed largely to the lack of data on public services and government performance, rather than to the lack of resources or technology.

For open data at the local level to generate value, standards of quality need to be established and maintained (McKinsey, 2014). But quality data has its costs. In the case of Chennai, city government officials admit that they are unable to provide comprehensive and correct information. Though there is a large amount of data about the city, spatial and non-spatial, digitized and otherwise, that is available with different government departments and agencies, this data is collected and stored in various formats and locations, making it difficult for both citizens and public officials to access it. There is no central data repository that can facilitate sharing and consequently, different agencies either do not have complete data or collect again that were collected by other

agencies. In this context of poor quality data, any push for open data will, in parallel, have to include a push to improve the quality of the data as well, and to ensure that the data used for planning in the future does not lead to the further exclusion of the poor simply because of the poor quality of available information.

This problem is not peculiar to Chennai. One of the case studies in the Philippines highlighted the lack of quality data in both health and micro-enterprises – two sectors that can provide valuable data to help sub-national governments plan better health and economic development services to achieve social and economic ends. However, data is used for transactional and record-keeping purposes only and kept in printed formats. In Kenya, rural residents interviewed by the researchers complained that the data contained in portals are not updated and useful, preventing them from making better decisions based on data.

This does not only point to the lack of capacity, but also to lack of attitude in valuing data on the part of sub-national governments. In some cases, like in the Philippine case mentioned above, data is kept and maintained for internal accountability purposes – as evidence to show that work has been done for a type of transaction and for a set of clients – and less as a means to achieve external accountability. Data was not even kept to plan better or perform future services in a more effective and efficient manner. It has been argued that there is still a need for governments to see the value of open government data (Ubaldi, 2013). A basic building block for this to happen is for them to see the value of data, above all things else.

Admittedly, this synthesis is largely dependent on the written research papers and as earlier indicated, there was no opportunity to go back to case authors to provide more information. Despite limitations, this synthesis is able to point out current gaps in our understanding of open government data especially in the context of sub-national governments, and these are presented below for consideration in future research.

Firstly, there is limited understanding on how, like in the case of governance reforms in decentralized contexts, the different levels of governance (e.g. national, province, district, city, municipality) interact to create an environment that would be conducive to greater openness in sub-national data or to greater openness of sub-national governments. It is important, in this case, to understand how open data evolves within different natures of central-local relations. While this paper highlights the role of

national legislation in shaping sub-national openness, it also presents cases of sub-national governments creating open data initiatives on their own, even without a national mandate. Understanding these relations is critical in the design of future open data initiatives. Conceptually, context extends beyond the description of national situation or local idiosyncrasies and becomes a description of relations between different actors across various level of state governance.

Secondly, we also have a limited understanding of how different stakeholders access and use open data, or if not, government data, in sub-national contexts. Except for the Kenya case study where we knew that rural residents, for example, prefer the radio as a means to have access to governance information, there is limited discussion in the other cases on what data do citizens, or citizen groups access and use, and how they get access to these data sets. Who are the users of government data? What data do they need and have? What mechanisms are in place for data access? How are these mechanisms established and implemented? These are critical questions that will help us understand how to create an enabling environment for open government data in sub-national contexts.

Finally, there is a need to define, test, and evaluate theories of change in achieving impact through open data, especially at the sub-national level where the relationship between government and citizens is more proximate and pronounced. In the cases mentioned in this paper, little is said about how open data is theorized to achieve transparency or better service delivery and how this change can be measured when they occur. In building the case for open data, we need to have more clarity about how open data can lead to the desired political, social, and economic impact.

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Annexes. Case Profiles.



Case study The quality of civic data in India and the implications for the push on open data

Location Chennai, India

Summary The project conducted in the city of Chennai examined data availability, quality, processes of creation and use of data and impact of data quality across the three sectors of water, public sanitation and public health. Thus, by identifying common problems with data quality, common methodologies and/or general principles that can be developed, through which Indian and other developing country cities can better account for the informal and the urban poor in their existing numbers.

Factors facilitating OD Context: Organizational; Governance: OD adds greater pressure on the government by providing residents more information about their entitlements. It could enable better planning for poor and underserved communities by the government. It could assist in measuring the impact of policies and schemes designed to benefit the urban poor. It could enable public agencies to better monitor their performance effectively; OD Activities: Interviews, surveys, physical and digital mapping methodologies, public consultations and focus group discussions

Factors facilitating supply Supply: Reports available with CoC-Corporation of Chennai and CMWSSB-Chennai Metropolitan Water Supply and Sewerage Board ; Legal framework: 2005, Right to Information Act at national level
Data Formats: Excel, hard copy formats, PDF, scanned images, GIS formats (limited);
Intermediaries: Transparent Chennai

Factors facilitating demand Who demands it? Government, Citizens, Civic society;
Access: CoC and CMWSSB websites; Intermediaries: Transparent Chennai



Case study Opening Cities: Open Data in Montevideo

Location Montevideo, Uruguay

Summary The report attempts to understand a clear measurement of how the release of datasets will improve the life of city dwellers. This is done through three studies.

1. Create framework to analyze open data policy. 2. Understand how Montevideo's policy was designed and how it evolved. 3. Analysis of the city's initiatives.

Factors facilitating OD Context: Political; Governance: Open government data could become the foundation of a new way of urban governance, where citizen organizations could lead the way to a more participatory kind of governance. Hence city governments might be able to steer OD environment instead of fully controlling it; OD Activities: Creating a hacker-developer environment, Promoting apps citizens can help collect data with and later use the data for their convenience eg. Public transportation, Public workshop.

Factors facilitating supply Supply: Website with 42 datasets made available by Open data working group, wireless embedded systems; Legal Framework: Law 19179 requests public administration to give open source products preference and force the state to store and release information in at least one open standard Stakeholders: Open Data Working group; Data Formats: CSV; API: Open data apps like Por mi Barrio, GiTour, Artur Tourism, Montevideo Bus, Acavamos, Montevideo LBS, Como ir, When is the next Bus, GxBus, Cartography, Where do I recycle?; Intermediaries: City engineers, Civic society groups, Freedom of information dept.

Factors facilitating demand Who demands it? Civic society, City council, Entrepreneurs; Access: Web portal, mobile apps (private and public)

Source <http://www.opendataresearch.org/sites/default/files/publications/Opening%20Montevideo-a%20case%20studyfinalII.pdf>

Case study Open Government Data in Rio de Janeiro City

Location Rio de Janeiro, Brazil

Summary The case study examines the challenges for local public sector organization in terms of agenda setting, formulation of public policy, implementation and evaluation channels/models. Rio de Janeiro could transition from its current approach (top down) to include more bottom-up elements. Then, the public policy of open data would be closer to a balance between public participation via civil society, and the harnessing of high skilled and trained teams in order to both create transparency and enhance work with data inside the government.

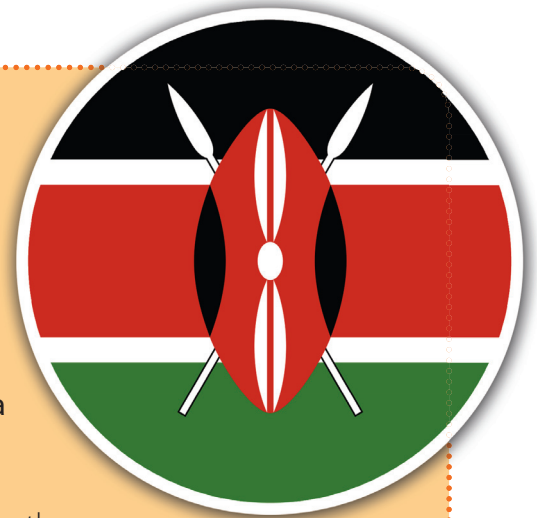
Factors facilitating OD Context: Political, Organizational; Governance: Through OD develop databases that would be useful to citizens and also help develop the city economically; OD Activities: Open data hackathon, Rio apps, Rio Ideas asking citizens to provide ideas on the type of apps and data they wanted in their city, Voluntary approaches, Education and training by open data forums, Publishing technical data manuals.

Factors facilitating supply Supply: Real time data, datasets available with the city council; Stakeholders: PENZA, COR ; Data Formats: Finance and account dept. have datasheets in open formats, Urban planning dept. have maps, geo referenced shape files, CSV; API: Web portal, Rio ideas, Rio apps, BUUS App, Easy Taxi App; Intermediaries: Open data committee

Factors facilitating demand Who demands it? City council, Technical experts; Access: Rio has 3 portals. 1. Armazém de Dados emphasizes interactive and transparent access to information, but does not focus on providing data for re-use. Mostly data retrieved using GIS. Has only 3 datasets in open formats. 2. Rio DataMine, has a focus on coders and programmers from the city, and was created specifically for enterprises and start-ups users to create apps and present at the challenge of concepts. Has 46 datasets available via API 3. Centralized data portal 1200 datasets of 7 secretariats, agencies and departments, Mobile apps.; Intermediaries: Open data committee

Source: <http://www.opendataresearch.org/sites/default/files/publications/5-%20Open%20Government%20Data%20in%20Rio%20de%20Janeiro%20City-print.pdf>





Case study Open Government Data for Effective Public Participation

Location Two slums in county of Nairobi and Mombasa and rural settlement in Isiolo County, Kenya

Summary The study a) Investigates the impact of the Kenyan Government's open data initiative and to see whether, and if so how, it is assisting marginalized communities and groups in accessing key social services and information such as health and education; b) Understands the way people use the information provided by the Open Data Initiative; c) Identify people's trust in the information and how it can assist their day-to-day lives; d) Examine ways in which the public wish for the open data initiative to improve, particularly in relation to governance and service delivery.

Factors facilitating OD Context: Organizational; Governance: KODI (Kenyan open data initiative) urges citizens to seek and use government information in different domains of their lives. Thus, more and better government information is fundamental to enhancing effective public participation in the marginalized areas covered (slums and rural settlements); OD Activities: Questionnaire, Interviews with citizens, Focus group discussions

Factors facilitating supply Supply: Commission and dept. reports, Budget, Public funds, Education, Health, Employment; Legal framework: Article 34, 35 of bill of rights emphasizes every citizen has the right to access information held by the state. KODI Kenyan open data initiative was launched in 2011. Data Formats: Hard copy formats in the form of records; Intermediaries: Community center, Church/ Mosque, Chief's office (most information is supplied by)

Factors facilitating demand Who demands it? Citizens; Access: Outdated websites, Google, Citizens also suggested Radio/TV and newspaper

Source: <http://www.opendataresearch.org/sites/default/files/publications/JHC%20Publication%20April%202014%20-%20ODDC%20research.pdf>

Case study Exploring the Role of Open Government Data and New Technologies: The Case of the Philippines

Location Bacolod, Bago and Iligan, Philippines

Summary The report looks at data sets used in MHCC: Maternal Healthcare & Children and MSME: Micro-small & Medium scale enterprises to improve healthcare services and practices and help the economy of the Country of Philippines to thrive.

Factors facilitating OD Context: Social and Economic; Governance: Open data initiatives help in policy development (local ordinances and MIS policies for LGUs). Improve the efficiency of health services in terms of operations (flow of information and decision), cost savings, communications (improved communication between patients and health service professionals) and resource allocation. It will also help identify the needs of the local business sector and design appropriate programs and legislations; OD Activities: Capacity Building (Organizing training activities), Target Demand of Members (Capture requests of members through informal channels) and Determining the Market (Review government plans)

Factors facilitating supply Supply: Data availability in terms of records which are not updated; Stakeholders: Healthcare professionals, citizens, patients and service providers (public and private), Local business associations & cooperatives, Local government units, National government agencies; Data Formats: Hard copy formats in the form of records, Data converted to excel sheets, Health status spot maps, Member/ community/ market profiles in form of excel sheets, PDF, LGU; Intermediaries: Rural Health Units RHU and Barangay Health Workers BHW, Business assistance centers, Chambers of commerce, DTI regional and provincial offices, economic zones, foreign trade service corps (FTSC), government financing institutions, and trade associations.

Factors facilitating demand Who demands it? Field health service information system, LGU, Local businesses and cooperatives, chain stakeholders, Government; Access: Web portal; Intermediaries: Rural Health Units RHU and Barangay Health Workers BHW, Business assistance centers, Chambers of commerce, DTI regional and provincial offices, economic zones, foreign trade service corps (FTSC), government financing institutions, and trade associations.

Source: <http://www.opendataresearch.org/sites/default/files/publications/Open%20Data%20Opportunities%20in%20Maternal%20Health%20and%20Child%20Care%20and%20MSMEs-print.pdf>



Case study Open Data in the Legislative: The Case of Sao Paulo City Council

Location Sao Paulo, Brazil

Summary The study attempts to understand the impacts that OGD policies are producing on local civil society and private sector in the São Paulo City Council. The case study shows us that it is necessary to study more on what factors can allow initial progress towards open data, to secure greater continuity. It also explores the important role of civil society in open data.

Factors facilitating OD Context: Political, Organizational; Governance: Open Data offers resources to society for monitoring the legislature, and for participation in the political-administrative decisions of the legislature through the availability of databases with non-confidential information in electronic form and open formats; OD Activities: Open data hackathon, Voluntary approaches, Education and training workshop on open data in 2011, Open data manuals.

Factors facilitating supply Supply: Datasets available with city council, data collected through apps; Stakeholder: City council, Civic society; Legal frameworks: Act 1156 determines the publication of data from São Paulo City Council in open formats, and calls for it to be accessible through the web portal.; Data Formats: XML, CSV, HTML API: Mathematical analysis of data from polls of bills (only one updated), Algorithmic analysis of textual data of the Municipality, City map showing improved suggested by Alderman, Platform timeline of actions taken by current Alderman. These are the working projects from the hackathon finalists. App generates contents in wiki format; Intermediaries: Police Neto, Department of Information technology, Open knowledge foundation Brazil, W3C Brazil, Transparency Hacker community

Factors facilitating demand Who demands it? City council, Technical experts; Access: Public data portal

Source: <http://www.opendataresearch.org/sites/default/files/publications/5-%20Open%20Data%20in%20the%20Legislative%20-%20The%20Case%20of%20Sao%20Paulo%20City%20Council-print.pdf>



Case study Opening Cities: Open Data in Buenos Aires

Location Buenos Aires, Argentina

Summary The report seeks to identify how OGD policies emerged and explore the impacts these policies are producing in the city of Buenos Aires. One of the main features of Open Government Data policy is the decentralized nature of the responsibilities towards the disclosure of government data. That is, each agency is responsible for authorizing the release of the data they produce. Thus, the Office of Information and Open Government has no responsibility over the release (or withholding) of any particular dataset. This took some pressure off from the shoulders of the newly created agency and, therefore, left some room for this new unit to focus on other aspect of the policy implementation.

Factors facilitating OD Context: Political; Governance: OGD by design allows publishing data while creating the demand in the community for further disclosures. Thus, help create a scenario where not only city officials but third parties can use the data to make smarter decisions; OD Activities: Ciudadano Intelligent (Smart Citizen Foundation), Open Society Foundations and the World Bank Institute organized a workshop in Santiago. BAHckaton 2012, 2013, B Apps 2012, GobCamp Buenos Aires 2012

Factors facilitating supply Supply: Government data catalogue; Stakeholders: Hackers groups, web developers, civil society users, government officials; Legal Framework: Decree on Open Government (156/2012); Data Formats: CSV, XLS, PDF, SHP, API; Intermediaries: FOI freedom of information advocacy groups, Policy entrepreneurs (inside and outside public sector), Actors from the social media and e-government units of the City of Buenos Aires, "tech-savvy" organizations, individual developers, visualization's experts.

Factors facilitating demand Who demands it? Civic society, City council, Entrepreneurs; Access: Dataportal

Source: <http://www.opendataresearch.org/sites/default/files/publications/Final-Opening%20Cities%20-%20Buenos%20Aires%20final%20report.pdf>



Case study **Opening the Gates: Will Open Data Initiatives Make Local Governments in the Philippines More Transparent?**

Location Provinces of Bulacan, Bohol and South Cotabato, Philippines

Summary The study focuses on how three provincial governments in the Philippines engage in open data initiatives through its compliance to the full disclosure policy and how it impacts on making governments more transparent and accountable; and whether this process of opening up yields a cyclical process of more opening up of spaces for the governed to engaged with the bureaucracy.

Factors facilitating OD Context: Political; Governance: The FDP created horizontal and vertical linkages between data suppliers, compliance monitors and data uploaders which smoothed changes within the local bureaucratic system. The FDP also systemized the process of uploading documents to the websites and finally changed a few roles and responsibilities of local government personnel. GOLD (governance and local development) project yielded to initialization of several offices, improved financial systems and procedures and activated special local bodies.; OD Activities: Openness assessment - Government websites, Provincial fieldwork and analysis, Key Informant interviews and focus groups, creating awareness about FDP

Factors facilitating supply Supply: LGU records, general information, tourism, budget reports, procurement reports, special purpose fund reports; Legal framework: 75% of the number of total local government units in the country complied with the full disclosure policy. Policy edits: The FDP is suggested to be edited such that, information can be viewed as visualizations instead of just tables and numbers. Machine readable documents is supported by the legislature enactment. The Local Government information policy to spread awareness; Data Formats: PDF or scanned images, web pages, excel (very few). Most files are not machine readable.

Factors facilitating demand Who demands it? Citizens, Civic society, Private sector; Access: Websites; Intermediaries: NGOs, community associations, sector organizations, institutions, colleges, civic groups

Source: <http://www.opendataresearch.org/sites/default/files/publications/Opening%20the%20Gates%20-%20Will%20Open%20Data%20Initiatives%20Make%20Local%20Government%20in%20the%20Philippines%20More%20Transparent.pdf>



Case study **Measuring Open Data's Impact of Brazilian National and Sub-national Budget Transparency Websites and its impact on People's rights**

Location Brazil

Summary The research is divided into two stages: (1) The quantitative research was designed to measure the scope of rules imposed by new Brazilian legislation for budget transparency in open data format. (2) The qualitative research was designed to complement the data collected during the quantitative survey with the aim of capturing possible impacts of open data on expanding human rights on perception of more qualified users (intermediaries)

Factors facilitating OD Context: Organizational; Governance: OD helps to understand how civil society organizations and movements could be more skilled in monitoring public policies. Thus, contributing to the expansion of rights. It has also led to the promotion of data journalism; OD Activities: Meetings with local social movements, local social media on the Web, press, meetings with government, skyping with intermediaries

Factors facilitating supply Supply: Through the data portal; To be noted: absence of explicit licenses, data on portal is non-discriminatory; Stakeholders: Government ; Legal framework: LAI Access to information act 2011, Transparency Portal of the Federal Government was formed in Nov 2004 by CGU office, Code of practices on Fiscal Transparency 2007, Decree 7,185/2010; Data Formats: PDF, XLS, CSV, HTML API: E-MAG; Intermediaries: GPOPAI

Factors facilitating demand Who demands it? Government, Citizens; Access: Siga Brazil portal, web sites
Intermediaries: INESC, NGOs (CFEMEA, OKF Brazil et al), journalists, universities, hackers

Source http://www.opendataresearch.org/sites/default/files/publications/Inesc_ODDC_English.pdf



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