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**EVALUATING THE ROLE OF OPEN DATA IN GOVERNMENT
ORGANIZATION :IN CASE OF DEVELOPING COUNTRY;A REVIEW**

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Abstract

Recent years have witnessed considerable speculation about the potential of open data to bring about wide-scale transformation. This testimony finds that until now the number of open data initiatives in developing countries is still inadequate, but the coming years will probably see a large increase of open data initiatives in developing countries. Both civil society organizations and

external partners of developing country governments are encouraging the use of open data to increase transparency, accountability and citizen participation. Particularly the Open Government Partnership is promoting open data initiatives in developing countries

Open data, especially open government data, is a tremendous resource that is as yet largely untapped. Many individuals and organizations collect a broad range of different types of data in order to perform their tasks. Government is particularly significant in this respect, both because of the quantity and centrality of the data it collects, but also because most of that government data is public data by law, and therefore could be made open and made available for others to use. Open data provides new opportunities for commercial applications, improves time-to-market for businesses, and can form the foundation for new technological innovation and economic growth. Third parties without the resources to gather this data for them will be able to re-purpose it and utilize the information to develop new applications and services. Governments, civil society organizations and companies across the world are actively engaging with open data: publishing and using datasets to promote innovation, development and democratic change. The Open Data Research network has been established to connect researchers from across the world working to explore the implementation and impact of open data initiatives

Key word: - Open Data, Developing country, Open Government Data

1. Introduction

Over the past decade, there has been a considerable trend towards greater openness and transparency with meaningful information concerning the public. From open source, to open content, to open access, the public is steadily gaining a broader and more in-depth look at the underpinnings of society, and decision-making is gradually becoming more decentralized[1]. The availability of data has previously been limited to executives and data specialists, whereas for everyone else, exposure to these sources is often delayed, intermittent, or simply unavailable[2].

It is early days for Open Data in developing countries: Even if there is sometimes a lot of enthusiasm about the potential of open data to promote development, the truth is that it is still early days for open data in developing countries. Like in Europe, the number of open data sites in developing countries, the quality of data they hold and their use is still very limited[3].

The Open Data Movement

Open data is valuable information that is both free and easily accessible to anyone, without limitations or restrictions. Governments are particularly interested in fostering this new strategy for connecting with their residents, a movement which has become known as open government. Many government bodies have begun to recognize the benefits of conducting more open and transparent operations. Information ranging from legislation, policies, and practices to government performance are being made available to the public through a single source[4].

Open government data has the potential to promote significant change for the operation of a city and the lives of its residents. Here are just a few of the ways that the open data movement can lead to a more effective and efficient government[4].

Increases Transparency and Accountability

The trend towards open data means that members of the public can stay connected, informed, and up to date with the day-to-day operations of their local government. The public nature of this information holds governments accountable to the results they produce. Residents have the ability to see exactly what their government has achieved, and how much more needs to be done. Failure to attain certain results or meet a particular milestone or goal will be publicized and up

for public scrutiny. Conversely, achieving or exceeding goals will help to establish a greater and more trusting relationship with local residents.

Develops Trust, Credibility and Reputation

The transparent nature of publicly accessible data exposes a side of an organization which is quite often kept under wraps. This sort of openness and vulnerability is comparable to sharing aspects of your personal life with another person. There is a considerable amount of trust and respect that comes with an open and honest conversation and the result is quite often a closer and more dependent relationship between the two parties. In the same way, open government data helps to establish *trust and credibility* with citizens. Open data can give residents peace of mind that their local government is continually working to deliver on promises and making decisions in the community's best interests.

Promotes Progress and Innovation

The value of key performance data has few bounds when set loose in the public sphere. Open data provides new opportunities for commercial applications, improves time-to-market for businesses, and can form the foundation for new technological innovation and economic growth. Third parties without the resources to gather this data for them will be able to re-purpose it and utilize the information to develop new applications and services. Information provided in this way is also significant for academic, public-sector, and industry-based research communities. Open data vastly increases the value of information and allows it to travel and be utilized to its full potential.

Encourages Public Education and Community Engagement

What better way to educate the community on progress and performance of the city than to have all the information displayed in a clear and user-friendly display? Open government data enables you to proactively answer those frequently asked questions by making the information freely accessible. Information can be made available as quickly as it is gathered, which means that the public can become involved and offer valuable feedback from throughout the entire process. Access to meaningful data aids in unifying a community and empowering them to help shape the direction for the future.

1. How are open data initiatives contributing to poverty eradication in developing country?
2. How could the contribution of open data initiatives to democracy development in developing country?
3. What is the relationship between sustainable developments with open data?

Why Open Data?

Open data, especially open government data, is a tremendous resource that is as yet largely untapped. Many individuals and organizations collect a broad range of different types of data in order to perform their tasks[5]. Government is particularly significant in this respect, both because of the quantity and centrality of the data it collects, but also because most of that government data is public data by law, and therefore could be made open and made available for others to use. There are many areas where we can expect open data to be of value, and where examples of how it has been used already exist. There are also many different groups of people and organizations who can benefit from the availability of open data, including government itself. At the same time it is impossible to predict precisely how and where value will be created in the future. The nature of innovation is that developments often come from unlikely places[6].

It is already possible to point to a large number of areas where open government data is creating value. Some of these areas include[7]:

- Transparency and democratic control
- Participation
- Self-empowerment
- Improved or new private products and services
- Innovation
- Improved efficiency of government services
- Improved effectiveness of government services
- Impact measurement of policies
- New knowledge from combined data sources and patterns in large data volumes

Literature review

Open data disruption

The future of open data is a collaborative process with the aim of providing civic benefits. Organizations need to share their data and work together to create novel uses for it that makes our lives easier or richer. Using data that describes the patterns behind how we live can help us solve problems in ways we might not have foreseen[8].

What is open data and why is it important?

This is a post from one of our partners, Open Data Solutions. Open Data is an exciting new concept which will be spreading through at least North America and the rest of the world in the next couple of years. Everyone should be aware of this policy and figure out how they can be involved. See the original post here[9]

“Open Data” is a policy in which governments release their raw data in machine-readable format. This data is unbiased, with no previous analysis and has been collected using tax payer money. From here, government open data initiatives take this data and provide visualizations to make this data easily navigable and understood by the public. Visualizations can be in the form of spreadsheets or interactive maps or charts – however the data is best displayed. These government initiatives are driven by involvement of their communities. Citizens can request data sets, anything from crime records to environmental data to broadband speeds. This civic engagement is vital to the success of an open data portal[10].

Open Data vs. Open Government

Open Government and Open Data are similar but are not the same thing. Open Government is a policy which promotes “transparency” but instead of the raw, machine-readable data, Open Government data is released in pre-analyzed, proprietary formatting. While this is technically “transparency” of data, it doesn’t allow for the data to be shared and used in any way but how it’s released. Open Data has many more uses than Open Government data[11].

The benefits of Open Data are diverse and range from improved efficiency of public administrations, economic growth in the private sector to wider social welfare[8]:

Performance can be enhanced by Open Data and contribute to improving the efficiency of public services. Greater efficiency in processes and delivery of public services can be achieved thanks to cross-sector sharing of data, which can for example provide an overview of unnecessary spending.

The economy can benefit from an easier access to information, content and knowledge in turn contributing to the development of innovative services and the creation of new business models.

Social welfare can be improved as society benefits from information that is more transparent and accessible. Open Data enhances collaboration, participation and social innovation.

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For 2016, the direct market size of Open Data is expected to be 55.3 bn EUR for the EU 28+. Between 2016 and 2020, the market size increases by 36.9%, to a value of **75.7 bn EUR** in 2020, including inflation corrections. For the period 2016-2020, the cumulative direct market size is estimated at 325 bn EUR.

Benefits of open data

As with any public initiative, Open Data involves some expenditure of public resources and effort. As such, public officials are often interested in the benefits of Open Data compared to the levels of required effort.

Similar to other global commodities, data has significant potential to provide benefits. In fact, data has been referred to as the new oil, because while both data and oil have intrinsic value, they both must be “refined” and otherwise transformed to realize their full potential. When government data are made accessible and re-usable, they enable individuals, organizations and even governments themselves to innovate and collaborate in new ways[12].

From accelerating economic growth to ensuring government accountability, Open Data can benefit citizens, organizations and the governments themselves[13]:

- **Transparency.** Open Data supports public oversight of governments and helps reduce corruption by enabling greater transparency. For instance, open data makes it easier to monitor government activities, such as tracking public budget expenditures and impacts. It also encourages greater citizen participation in government affairs and supports democratic societies by providing information about voting procedures, locations and ballot issues.
- **Public Service Improvement.** Open Data gives citizens the raw materials they need to engage their governments and contribute to the improvement of public services. For instance, citizens can use Open Data to contribute to public planning, or provide feedback to government ministries on service quality.
- **Innovation and Economic Value.** Public data, and their re-use, are key resources for social innovation and economic growth. Open Data provides new opportunities for governments to collaborate with citizens and evaluate public services by giving citizens access to data about those services. Businesses and entrepreneurs are using Open Data to better understand potential markets and build new data-driven products.
- **Efficiency.** Open Data makes it easier and less costly for government ministries to discover and access their own data or data from other ministries, which reduces acquisition costs, redundancy and overhead. Open Data can also empower citizens with the ability to alert governments to gaps in public datasets and to provide more accurate information.

Open data and economic growth

Open (data) for business

At OGP when we say open data, we think of governments and public institutions opening up their data. Examples are geographical information, statistics, weather data, data from publicly-funded research projects, and digitized books from libraries. We think economic gains will happen around the world along three main channels[6]:

- **Business innovation:** Broader and more rapid access to scientific papers and data will make it easier for researchers and businesses to build on the findings of public-funded research. This will help boost a country or region's innovation capacity in fields like pharmaceuticals and renewable. Taking the example of the European Union, it will give that region a better return on its €87 billion (USD \$106 billion) annual investment in R&D.
- **Business creation:** A new market for public service information will thrive if data is available and products/services are developed by businesses by adding value to the original public service data provided by a government. Businesses, in other words, can build new innovative applications and eServices based on those data that the government can make available with minimal cost to itself.
- **Business efficiency:** Businesses (and public bodies) could benefit from more open data by gaining more precise and complete insight into customers' (and citizens') preferences and needs, thus becoming more efficient in tackling those needs and at the same time contributing to a smart growth[14].

Some country-specific examples

Australia: a study conducted by the Australian government of the aggregate economic impacts of spatial data on the national economy suggested that open spatial data and high precision positioning systems can increase productivity by billions of Australian dollars across a range of industry sectors. For instance spatial information industry revenue in 2006-07 could have added cumulative gain of AUD 6.43-12.57 billion (USD \$6.7-13 billion) , equivalent to 0.6-1.2% of GDP.

Denmark: a study (in Danish) on Quantifying the value of open government data showed that banking, insurance and energy indicated that better access to public sector information could be of significant value, with the energy industry estimating that in conjunction with the construction industry the potential national market for energy improvements drawing on various government data sources is €0.54-2.7 billion (USD \$0.55-3.3 billion).

European Commission: a recent European Commission Communication on Open Data predicts that overall economic gains from opening up public data could amount to €40 billion (USD \$48.7 billion) a year in the EU.

Ireland: a study by TASC has shown that charging for data does not lead to cost recovery, that the country's FOI law is not "expensive" as such, and that the estimated value of the business potential of reusing public data is between €83-399 million (USD \$101-486 million) per annum.

Kenya: Kenya became Africa's first country to digitize its information as part of a wide-scale open data initiative. The initiative is yielding a secondary economy with a range of apps that are being created to help people access, manage and comment on government information.

Spain: a government-commissioned study found in-country business volume directly associated with open data released by national government was €550-650 million (USD \$669-791 million) and between 5,000 and 5,500 employees were directly assigned to activities related to re-using information.

US: opening its weather data led to gross receipts by commercial weather industry of USD \$400-700 million a year with 400 firms employing 4,000 people. By comparison, Europe had a similar sized economy but with largely closed weather data, and had only 30 firms with 300 employees and receipts of USD \$30m-50m a year.

Supporting sustainable development with open data

Open data can make an impact across the globe. Its role in combating development challenges of the next 15 years, both as a tool for measuring progress and in finding solutions, is becoming more clear. As this paper will show, open data has been used to help plan smarter cities in Rio de Janeiro, streamline emergency response in the Philippines, map the Ebola outbreak to save lives in West Africa and help parents to assess school performance in Tanzania. Open data can also bring significant economic benefits: it could be used worldwide to generate between US\$720-920bn in digital transport applications, and US\$150-270bn in geospatial technology[15].

With these challenges in mind, the report sets out ways that governments, donors and (international) NGOs – with the support of researchers, civil society and industry – can apply open data to help make the SDGs a reality:

1. **Reach global consensus around principles and standards**, namely being ‘open by default’, using the Open Government Partnership’s Open Data Working Group as a global forum for discussion.
2. **Embed open data into funding agreements**, ensuring that relevant, high-quality data is collected to report against the SDGs. Funders should mandate that data relating to performance of services, and data produced as a result of funded activity, be released as open data.
3. **Build a global partnership for sustainable open data**, so that groups across the public and private sectors can work together to build sustainable supply and demand for data in the developing world.

This report explores how world leaders can use and promote open data to tackle global problems post-2015. It does not evaluate specific SDGs, but provides examples of where open data is starting to make a difference in cities and nations around the world. It draws extensively on international open data case studies, the Open Data Barometer, – a survey of open data policy and practice across the world, launched by the World Wide Web Foundation – and ongoing research by the Open Data Research Network.

The Open Data Charter - Why it's a Big Step for Open Data

This week, the G8, an assembly of world leaders representing eight of the eleven largest national economies in the world, collectively representing over 50% of global GDP, strengthened their commitment to Open Data initiatives by signing the Open Data Charter. This Charter laid down five principles to which any open data program should adhere. These principles extol the benefits of Open Data while solidifying the intent of these countries to grow and maintain successful open data portals. They begin with the assertion that by 2015, all data should be open by default. The commitment of the G8 to these principles extends beyond Government and public institutions to any organization, public or private, with data sets. If the G8 countries stick to the Open Data Charter, this could increase accountability and therefore the trust between

governments and their constituents. Of course, this trust will only grow if the municipality in question operates with the maximum amount of fairness and efficiency[6].

How can Open Data increase governmental accountability and trust? An open data policy will allow taxpayers to see where their money is being spent. In Finland, one man developed and published a "Tax Tree" to display this information. The British "Where Does My Money Go?" shows the distribution of their tax money. An open data policy would increase efficiency in the government as well. In the case of the Dutch Ministry of Education, once they released their data, inquiries from the public decreased. This allowed for less labor time for answering those inquiries and frees up those resources to focus on other problem areas. A woman in Denmark re-used data from Denmark's Open Data portal and created a site displaying the location of all of the public toilets in Denmark. In this case, Denmark's Open Data policy increased the government's capability to deliver services by enabling citizens to solve problems themselves[8].

In order for this Charter to be effective and ramp up the spread of Open Data, the G8 countries must prove themselves strong leaders for each of the five principles named in the Charter. They'll need to have a strong commitment to releasing quality, non-personal data to the public and proving that it's useful to constituents. If the countries themselves can maintain this on the federal level, it will encourage implementation of open data policies on the regional and local levels. These programs will become more widespread as an increasing number of citizens notice the benefits of having a government that is working to become more efficient and accountable to its constituents. This strong commitment, if the G8 can diligently execute it, will increase efficiency, capability and even trust of the governments of these countries.

Finding of the report

These review generalized that open data could serve government officials in different departments for highlighting the value of information transparency in maintaining a good relationship towards the citizens they serve. Open data also enables citizens to engage and improve their communities in correspondence with local government bodies. Disclosing government-held data to the public can help enhance services to citizens applying not only to different citizen initiatives such as Code Across and Open Data Day, but also by improving coordination among agencies, internal and external stakeholders[16].

According to the literatures openness in government strengthens our democracy, promotes the delivery of efficient and effective services to the public, and contributes to economic growth[7].

This report finds that until now the number of open data initiatives in developing countries is still limited, but the coming years will probably see a large increase of open data initiatives in developing countries. Both civil society organizations and external partners of developing country governments are encouraging the use of open data to increase transparency, accountability and citizen participation. Particularly the open Government partnership is promoting open data initiatives in developing countries due to the following reasons.

- ✓ In developing country there is not clearly define regulatory framework for the implementation of open data at the federal Level.
- ✓ Defining policy and technical guidelines for the implementation of open data that could have benefit for organizations at the state and local level.
- ✓ Redesigning and improving the functionality of public facing open data portals.
- ✓ Disseminating information on the topic of open data and encouraging third-party development of applications using open data.

The potential however, was greatly evident from robust legal and policy frameworks, rapidly growing ICT sectors and a gradually shifting attitudes of both governments towards open data .There is need for open development pioneering institutions and stakeholders to work closely with governments and leverage these possibilities

We know that it creates a more accountable, efficient and effective government. Open Data is a raw material for economic growth, supporting the creation of new markets, business and jobs and helping us compete in the global race.

Open data enables citizens to be more involved with different governmental decisions, at the same time increasing accountability and transparency. It is the transforming agent of change, creating a whole new approach on the ways of communication between the citizens and their governments.

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Conclusion

In all these cases, the way to fast-forward innovation and create new solutions to problems is to create open data partnerships with participants who are willing to share and collaborate on new disruptive initiatives. Many of these initiatives have already proven to bring benefits to people, government and businesses. It is a new era of increased transparency and democracy where data is no longer in the hands of only commercial organizations. Using open data presents opportunities for commerce, while also improving communities and everyday living for citizens

This report identifies three where it could have a significant impact in the next development agenda and beyond.

Open data can:

1. more effectively target aid money and improve development programmes
2. track development progress and prevent corruption, and
3. Contribute to innovation, job creation, and economic growth.

To achieve these aims, the development community must address many challenges, including: a weak enabling environment for open data publishing, poor data quality, mismatch between the demand for open data and the supply of appropriate datasets, a digital divide between rich and poor, affecting both the supply and use of data and a general lack of quantifiable data and metrics.

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