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How to support the capacity of open data initiatives with assessment tools

Open Data Institute

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1.   Executive summary

This paper reviews existing open data assessment tools, to support organisations, researchers, open data leaders, and global development practitioners in conducting assessments to build capacity of open data initiatives.

Specifically, this paper will answer three key research questions:

1. What is the rationale for using open data assessment tools?

2. What are the different tools available for conducting capacity assessments, and what are their key features?

3. How effective are assessment tools currently designed for building capacity of open data initiatives?

There are various tools for assessing different aspects of an open data initiative. Some tools assess the capabilities of a country or organisation to implement an open data initiative. Others measure the ongoing implementation of an open data initiative, or the quality of the data being published. Others evaluate the impact created by open data.

For the purposes of this paper, we are particularly interested in how assessment tools can be used to provide useful insights into the **progress**, **opportunities**, **risks** and **challenges** of implementing an open data initiative – whether at the national, regional or city level.

Based on previous research, we have chosen to categorise open data assessment tools as assessing either open data capabilities, implementation or impact.[1] While some tools fall into one of these categories, most overlap. Each tool has different strengths and weaknesses, depending on what they focus on. Yet the tools often lack coverage of in key areas: culture change, operational management, data management systems and estimating impact.
Based on our review we make the following recommendations. Assessment tools and processes aimed at supporting open data capacity building should:

1. **Provide practical insights for managers and teams implementing open data initiatives on how they can improve implementation for enhanced impact**. In

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1   See Davies, T. et al (2014) *Towards common methods for assessing open data: workshop report and draft framework.* [Online] New York: The World Wide Web Foundation and the Governance Lab at NYU. Available at: http://opendataresearch. org/sites/default/files/posts/Common%20Assessment%20Workshop%20Report.pdf [Accessed 2016-04-18].

particular, include some interim progress targets to encourage organisations to learn from their experience and become more metric-driven in their approach.

2. **Take a holistic view that covers all aspects of managing the open data initiative (including leadership, implementation, finances and user engagement practice).** When examining implementation aspects, it is also important to consider open data within the context of the existing data management systems and capabilities, eg how data is being collected and accessed, as well as the quality of that data in case of any bias, to identify any possible issues limiting reliability, access or reuse.

3. **Incorporate inputs from multiple perspectives (internal and external) to provide a '360' view of the health of the initiative**. This may help to promote greater shared ownership of results and action steps flowing out of the assessment.

4. **Identify the various outcomes and impacts of open data initiatives, including any undesirable or unintended consequences.** More effort is required to establish common impact measurement methodologies, for example, to estimate the value and financial sustainability of the open data initiative – particularly in developing country contexts.

5. However, impact measurement should not be limited to only economic benefits, but also consider how open data connects with furthering other policy objectives of the organisation/country. Tools should also **recognise the social and environmental benefits that are likely to accrue from an open data initiative and be able to identify suitable ways to offset the costs in order to achieve those benefits.**

This paper forms one of a series of 'methods papers' produced by the Open Data Institute (ODI), looking at the literature and practice around how to support the growth and sustainability of open data initiatives around the world.

We begin by outlining the need for assessment tools before reviewing different open data assessment tools, their key features and methodologies, similarities and differences. We conclude by recommending the development of a comprehensive open data assessment tool that would be valuable to organisations, researchers, leaders responsible for implementing open data initiatives, and global development practitioners involved in open data capacity building activities.

2. Introduction

Open data is data that anyone can access, use and share. Open data can help bring efficiencies to policymaking, boost citizen engagement and stimulate innovation and economic growth. Governments and organisations around the world are developing an increasing number of open data initiatives: building capacities to use and produce open data for social, environmental and economic benefits.

As open data initiatives have expanded around the world, tools have been developed to evaluate capabilities to initiate open data policies, legislation, release and quality of open datasets, technology and technical capacity. Others have been developed to estimate open data's impacts on government performance as well as its social, environmental and economic benefits more broadly.

An **assessment tool** is a method for documenting, usually in measurable terms, an organisation's level of knowledge, skills, capacity or performance against predetermined criteria. The results can be analysed to reveal risks and opportunities, weaknesses and strengths, roadblocks and progress towards achieving desired objectives.

The various reasons for conducting an assessment means that a single tool may struggle to capture all of the elements of an open data initiative. Multiple assessment tools may therefore be necessary. For the purposes of this paper, we are interested in how assessment tools can be used to build an organisation's capacity to unlock a sustainable supply of open data.

Assessing open data for global development

Within the Open Data for Development Partnership (OD4D), there is a focus on different methods of capacity building are being explored, to support individuals, organisations and systems in developing countries to effectively plan, implement and manage impactful open data initiatives.

One of these methods is the **open data assessment tool**. This paper provides an overview of open data assessment tools, with practical recommendations for organisations, researchers, open data leaders and global development practitioners looking to use them to build their open data capacity.

We aim to answer three key research questions:

1. What is the rationale for using open data assessment tools?

2. What are the different tools available for conducting capacity assessments, and what are their key features?

3. How effective are assessment tools currently designed for building capacity of open data initiatives?

3. Assessment tools: definitions and characteristics

The purpose of open data assessment tools

As open data initiatives have multiplied in jurisdictions around the world, so too have open data assessment tools. These tools assess open data quality, capacities, standards and initiatives, to evaluate performance and help us to understand the impacts of approaches and actions to inform open data strategies.

There are several purposes for open data assessment tools, which can be grouped into five broad themes, depending on who is conducting the assessment and why.

1. Implementing agencies and project teams can use them to **assess the quality of datasets, and monitor organisational progress against the objectives of their open data initiatives** (including achievements) to prioritise opportunities for achieving maximum impact.

2. Governments and citizens can use them to **benchmark performance against other countries**, and **identify specific areas where they could improve their capacity** to publish and reuse open data.

3. Businesses and social entrepreneurs can use them to **identify social or commercial opportunities for their products or services**.

4. Researchers and journalists can **understand the degree of transparency in a context, the social or commercial impacts of open data**, and **identify critical areas for future research** to improve open data policy and practice.

5. Funding agencies and open data activists can use them to **strengthen advocacy for investments in open data initiatives and capacity building efforts**.

For the purposes of this paper, we are particularly interested in the first two themes, ie how assessment tools can be used to support sustainable open data publication and use, through providing insights to managers and teams about areas of progress, opportunity, under-performance or risk. While we consider the other purposes to be vital in terms of growing the demand for open data, our focus is primarily upon the potential supply-side capacity-building benefits.

Open data assessment tools as a method for capacity building

Ongoing monitoring and evaluation of open data initiatives is vital as it helps governments and other implementing organisations to reveal problems, identify priority areas for improvement, and find opportunities for impact.

An assessment tool can identify how governments could engage with citizens and businesses better to stimulate demand for, and reuse of, open data. It can also determine what improvements are required to increase data quality and usability. If conducted in a participatory process involving external actors, including civil society, it may also help to strengthen the open data ecosystem to lay the foundation for social, economic and political impact.

Assessment tools can make comparisons across countries, governments or organisations which allows for benchmarking against the performance of others. Assessments can determine common minimum features for open data initiatives to adhere to, while also promoting global transparency and accountability through the publication of assessment results.

Who carries out assessments?

In terms of process, assessments can be conducted by internal or external evaluators. Internally, it can be carried out by an individual or group, and rely on information shared through observations, staff meetings and focus group discussions with internal (employees, senior management, department heads) and external stakeholders (users, businesses). External assessments are typically carried out by evaluators from outside the organisation being reviewed, and are based on publically available information or documents that the organisation shares as part of the assessment. It could also include interviews and site visits with internal and external stakeholders.

To learn more about the processes followed by different assessment tools, see the Appendix.

What constitutes an assessment tool?

The current landscape of assessment tools includes both quantitative and qualitative frameworks, which are delivered through a combination of external and self-assessment methods. The following table provides a summary of open data assessment tools and short descriptions of their methods, coverage and units of analysis. It draws on reviews presented in the Common Assessment Framework workshop report, the ODI's analysis of assessment tools, and (unpublished) discussion notes from an International Open Data Conference 2015 session on measurement.

[See Appendix Table 1: Landscape of assessment tools]

From this table, we can see that data assessment tools can be categorised using their unit of analysis – datasets, open data portals, organisations or countries, for example – as well as purpose. Tools may conduct their measurement at the level of the country, government agency, or company.

The 'Common Assessment Framework' originally proposed by the World Wide Web Foundation and Governance Lab at New York University, assesses open data initiatives using four elements: the **context** where data is being released; the **quality** of datasets; data **reuse**; and the **impact** gained from published datasets.[2]

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2   See Davies, T. et al (2014) *Towards common methods for assessing open data: workshop report and draft framework*. [Online] New York: The World Wide Web Foundation and the Governance Lab at NYU. Available at: http://opendataresearch. org/sites/default/files/posts/Common%20Assessment%20Workshop%20Report.pdf [Accessed 2016-04-18].

In this paper we classify assessment tools using similar, but simplified, categories according to whether they measure capabilities, implementation or impact. We have reframed 'readiness' as 'capabilities', as we are most interested in whether an initiative has the right capacity behind it for it to succeed, including a solid strategy and action plan.

1. '**Capabilities**' examines the preconditions for an open data initiative to thrive, for example the Open Data Readiness Assessment developed by the World Bank. [3]Measuring capabilities can help to understand whether the conditions for an open data initiative exist, and could help implementing agencies to identify potential opportunities for impact, or what capacity gaps/challenges to expect. Important aspects to assess include the legal and regulatory environment; organisational context; political will and leadership; technical capacity; the wider social environment, in terms of civil society and political freedoms; and the commercial environment and capacity of firms to engage with open data.

2. '**Implementation**' studies how open data policies are implemented and managed on a day-to-day basis. Typically these assessments examine the extent to which an organisation's initiative meets the criteria for open data, ie whether open data is (a) available and accessible, (b) reusable and redistributable and (c) allows for universal participation and access. Important aspects to assess relate both to data and use eg issues of data relevance and quality, users accessing (or providing) the dataset, the purposes for which the data will be used, and the activities being undertaken.

3. '**Impact**' attempts to uncover the causal relationships between open data, its use, and whether open data has resulted in increased transparency, accountability, greater participation, or other social, governance, environmental and economic benefits (and any unintended or undesirable consequences).

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3   See the World Bank's Open Data Toolkit. [Online] Available at: http://opendatatoolkit.worldbank.org/en/odra.html [Accessed 2016-04-18].

The table below summarises the categories of assessment tools, and common criteria they use to evaluate open data initiatives:

Category of assessment	Typical criteria being assessed
Capabilities	Legal context
	Presence of organisations
	Presence of leadership
	Technical capacity
	Social context
	Economic context
	Strategy and plans
Implementation	Availability
	Methodology/ quality: how complete, primary, timely, usable and reliable is data in general?
	Accessible, reusable and redistributable
	Universal participation
	Classifications: what kinds of datasets are available within a country or sector?
	Use of open data (key user-groups and datasets)
	Purpose of use
	Activities
	Internal management (change management, capacity and skills, budget etc)
Impact	Social benefits
	Environmental benefits
	Economic/ commercial benefits
	Political/ governance benefits

For more on the landscape of assessment tools and the criteria they measure, see the Appendix.

For our specific research focus, we have focussed on the implementation and impact categories, as these relate most closely to building ongoing capacity.

4. Analysis: evaluation of assessment tools for building open data capacity

In this section, we discuss how effective assessment tools can be designed to support the capacity of governments to unlock a sustainable supply of open data.

Assessing open data capabilities

Some assessment tools focus on the capabilities of a government to design and implement an open data initiative. Most of these tools analyse capabilities at the national level and use a checklist or points-based rating system that can be administered internally or by an external agency. Points-based rating systems can encourage a government to build capacities in areas that are prerequisites for the successful implementation of an open data initiative. For instance, the Open Data Readiness Assessment creates a comprehensive weighted score for open data capability based on an assessment of the surrounding legal and economic contexts, technical capacity, government leadership and civil society participation in open data initiatives. The system allows governments to prioritise weaker areas for investment and capacity building activities.

Current gaps and challenges

Checklists and points-based assessment systems offer a straightforward way of directing governments to build capacities in certain areas. However, quantitative methodologies can fail to capture important qualitative information. One key area is the attitude towards changing government culture from a closed to an 'open by default' position. In most organisations looking to implement open data initiatives, the biggest obstacle is often a reluctance to implement initiatives that promote transparency and accountability. Government officials are sometimes concerned about opening data that could expose problems in the government, mistakes in the data, or that could be misused by other people.

Tools based on surveys and checklists also tend to ignore context-specific information. For instance, the tools focus on the legal context of open data, and rate countries highly if they have legal provisions for open data. However, adopting open data legislation is a complex and time consuming process, especially in countries experiencing political instability. Also, checklists can be reductive in certain contexts: several countries release data without a legal framework or Freedom of Information laws.

Further, the current range of assessment tools do not necessarily elicit the kind of practical information that is useful for the project team who will be involved in actually running the initiative. A national-level assessment in including analysis of policy could be useful in delivering high-level guidance to senior leaders, but it may not equip the project team with operational-level information to inform their action plans.

Finally, though all the tools measure different aspects of capabilities, only the 'Open data in government: how to bring about change'[4] report recommendations and the Open Data Barometer attempt to link the rationale for the open data initiative to the intended outcomes. This linkage is important as it forms the basis for future assessments of the effectiveness and outcomes of open data initiatives.

Assessing open data implementation

Most assessment tools focus on aspects of how governments and companies implement open data initiatives. Some tools, such as the Open Data Inventory and the Open Data Index and Census, use checklists and point-based rating systems to evaluate countries or companies. Others like the Open Data Barometer and the United Nations E-Government Survey require experts to survey countries/companies and assess open data implementation.

Generally, tools in this category focus on data availability, quality, and data reuse. Assessing data reuse is important for several reasons: measuring the use of specific data provides governments with accurate information on demand, and increased levels of data reuse could indicate the success of a government initiative. Only the Maturity Model Pathway and the European PSI Scorecard evaluate both data quality and reuse.

Current gaps and challenges

Overall, we find a heavy weighting of tools towards impact research and/or generating comparative league tables, aimed at delivering content that is more suitable for an external audience (purposes 3–5, listed above). However, there appears to be less coverage of implementation aspects in general to support the open data initiative itself (purpose 2).

Although existing tools in this category are relatively strong on aspects of data publication and use, they do not tend to provide information on how governments can improve implementation and day-to-day internal management of open data initiatives. In particular, they do not

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4   Broad, E. et al. (2015) *Open data in government: how to bring about change.* London, Open Data Institute.

consider organisational aspects such as team structure, responsibilities, strategy, budgeting and leadership. Addressing cultural change issues such as progress towards developing an 'open mindset', or improving user engagement practice are other content gaps. More operational-level content, and interim progress targets is required to enable teams to measure their progress over time and position their initiative for success.

Assessment tools in this category typically focus on certain key datasets as indicators for the state of open data implementation including election results, maps, land ownership, government budgets and legislation data. Limiting the sample number of datasets is practical, and many of these datasets are highly valuable. However, many tools do not explain how they extrapolate their findings from the sample of datasets to make judgements about the overall national open data ecosystem.

We found in our review that measuring implementation poses several challenges. For instance, assessment tools may not capture background issues such as discrimination in data collection processes. These are issues that often relate to pre-existing data management systems, and are not specific to open data. However, tools that do not analyse how the data is collected run the risk of ignoring biases and irregularities.

While many tools focus on ensuring published data adheres to the open data definition, they do not always evaluate the quality of that data. By failing to evaluate the quality, some of these assessment tools may overestimate the usability and usefulness of published datasets.

Further, automated tools that simply measure open data availability on the internet may not address broader issues of who is able to access and use that data – an important consideration, particularly in developing contexts with lower internet penetration. There may be other cases where open data is available, but is not used (due to low awareness, for example), which assessment tools need to take into account. As a result, assessment tools that focus on implementation should also examine how the data is collected, and any barriers to use and reuse.

Assessing open data impact

Measuring impact can be very difficult, but several existing frameworks seek to evaluate open data impacts. There are a number of studies that have developed methods to quantify potential economic impacts of open data and have estimated the economic value of open data. For instance, a European Commission commissioned study in 2006 estimated that the economic value of the public sector information market was €27 billion,[5] while a similar study in the UK estimated that the government's open data portal (data.gov.uk) would increase its GDP by £28 million in 2016.[6]

Eight tools under review assessed the impact of open data, seven of which used surveys and self-assessment checklists. Only the paper 'Social impact of open data' uses outcome mapping and case studies as its primary methodology.[7] While tools using checklists can capture information on a wide variety of impacts, the latter paper provides deeper analysis on interim, indirect (or 'downstream') outcomes, focusing on three country case studies. Outcome mapping, unlike one-off assessment tools, can be used as a form of ongoing monitoring and evaluation to measure the progress and impact of an open data initiative.

Current gaps and challenges

As yet, there is little consensus around measuring the economic impact of open data. Work needs to continue in this area to advance common methods and understanding of estimating economic impact and value for money of open data initiatives, including in developing contexts. It is difficult to study the impact of something with so many potential benefits as open data.

Self-assessing open data impact could be a promising strategy as those who have experienced the impact are best placed to report it and take ownership of results. There is, however, a risk of producing biased results. For instance the Open Data Impact Map[8] and Open Data 500[9] require companies and organisations to fill in a short online survey about their use and reuse

5   Dekkers, M. et al (2006). *Final report of study on exploitation of public sector information: benchmarking of EU framework conditions*. Measuring European Public Sector Information Resources. Available at: https://ec.europa.eu/digital-single-market/en/news/mepsir-measuring-european-public-sector-information-resources-final-report-study-exploitation-0 [Accessed 2016-04-18].

6   Carpenter, J. and Watts, P. (2013). *Assessing the Value of OS Open Data™ to the Economy of Great Britain - Synopsis.* [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/207692/bis-13-950-assessing-value-of-opendata-to-economy-of-great-britain.pdf [Accessed 2016-04-18].

7   Keseru, J. and Chan, J. (2015). *The social impact of open data*. Sunlight Foundation. Available at: https://www.scribd.com/doc/263776138/The-Social-Impact-of-Open-Data [Accessed 2016-04-18].

8   Open Data Enterprise. *Open Data Impact Map*. [Online] Available at: http://www.opendataenterprise.org/map.html [Accessed 2016-04-18].

9   GovLab. *The OD500 Global Network*. [Online] Available at: http://www.opendata500.com. [Accessed 2016-04-18].

impact of open data. Since the survey is online, it excludes organisations that have benefitted from open data, but may not have access to computers and Internet connections, creating a biased sample. Self-reporting also relies on a common understanding of what constitutes 'impact', and the distinction between open data 'use' and 'impact' is still unclear.

Although most impact studies measure the economic and political benefits of open data – such as transparency and accountability – only the Open Data Barometer specifically measures environmental benefits. This suggests the need to look for more ways of assessing the broader range of open data impacts, including benefits that accrue downstream.

5. Conclusion and recommendations for developing open data assessment tools in the future

The various potential benefits of open data have now been well asserted – from increases in efficiency of service delivery to fostering economic innovation and entrepreneurship. The myriad of benefits has, in part, contributed to the difficulties around how to measure progress and impact. While many new tools have been developed to assess both internal and external aspects of open data initiatives, several elements are not adequately captured by existing assessment tools.

A number of recommendations emerge from this paper, which may help researchers, open data leaders and global development practitioners to achieve a more holistic picture of progress, capacity and impact through assessment tools and processes.

1. **Provide practical insights for managers and teams implementing open data initiatives on how they can improve implementation for enhanced impact**. In particular, include some interim progress targets to encourage organisations to learn from their experience and become more metric-driven in their approach.

2. **Take a holistic view that covers all aspects of managing the open data initiative (including leadership, implementation, finances, and user engagement practice).** When examining implementation aspects, it is important to consider open data within the context of the existing data management system(s) and capabilities eg how data is being collected and accessed, as well as the quality of that data in case of any bias, to identify any possible issues limiting reliability, access or reuse.

3. **Incorporate inputs from multiple perspectives (internal and external) to provide a '360' view of the health of the initiative.** This may help to promote greater shared ownership of results and action steps flowing out of the assessment.

4. **Identify the various outcomes and impacts of open data initiatives, including any undesirable or unintended consequences.** More effort is required to establish common impact measurement methodologies, for example, to estimate the value and financial sustainability of the open data initiative, particularly in developing country contexts.

5. However, impact measurement should not be limited to only economic benefits, but also consider how open data connects with furthering other policy objectives of the organisation/country. Tools should also **recognise the social and environmental benefits that are likely to accrue from an open data initiative and be able to identify suitable ways to offset the costs in order to achieve those benefits.**

What do you think?

If you have insights into open data assessment tools you would like to share, we want to hear from you. Get in touch with fiona.smith@theodi.org or tweet us at @ODIHQ.

7. About this report

The Open Data Institute (ODI) connects, equips and inspires people around the world to innovate with data. It is independent, nonprofit and nonpartisan, founded in 2012 by Sir Tim Berners-Lee and Sir Nigel Shadbolt. From its headquarters in London and via its global network of startups, members and nodes, the ODI oers training, research and strategic advice for organisations looking to explore the possibilities of open data.

This report was supported by the Open Data for Development (OD4D) programme. OD4D is managed by Canada's International Development Research Centre (IDRC), and it is a donor partnership with the World Bank, the United Kingdom's Department for International Development (DFID) and Global Affairs Canada (GAC). The OD4D network of leading organisations are creating locally driven and sustainable open data ecosystems in Latin America, the Caribbean, Africa, and Asia and East Europe. OD4D focuses on building up the supply of quality open data, and also on improving the use of that data by leaders in government, civil society, the media, and business so that it furthers public interest and improves people's lives.

A partnership funded by

8.   Appendix

Table 1: Landscape of assessment tools

Name	Description	Scope	Methods
Common Assessment Framework	Common framework	Countries	Assesses open data initiatives using four elements: the context where data is being released; the quality of datasets; data reuse; and the impact gained from published datasets.
European PSI Scoreboard	Crowdsourced and expert survey of European Public Sector Information policies and practices	Countries EU countries (subject to the Public Sector Information directive)	Quantitative scores against seven different dimensions. Total score out of 700.
Health Sector Indicators	Conceptual framework for measuring open data impact in specific sector	UK health sector Applicable to other countries	Various quantitative and qualitative indicators
Maturity Model and Pathway	In-depth assessment and analysis designed to help organisations (private and public sector) to assess how effectively they publish and consume open data.	Organisations	Self-assessment based on scoring system against five core categories Analyses organisational capacity + data management release process

Name	Description	Scope	Methods
OECD Framework	Paper suggests a methodology and framework to empirically analyse government open data initiatives	Framework and methodology guide proposed, however, no evidence of implementation to date	Proposed a government survey to be completed by officials
Open Data 500	Assessment of the value of open data in the private sector	Companies in USA. Expanding to other countries.	Desk research and survey of companies. Linking commercial activity with source datasets.
Open Data Barometer	Annual ranking of countries according to government open data initiative impact	86 countries on 2014 survey. Includes all G8 countries, but only partial OGP, OECD.	Expert survey and secondary data. Also gathers and reports on qualitative assessments. Analyses both organisational capacity (ie strategic oversight) + data management process and release
Open Data Certificate	Platform for data publishers to assess and improve the quality of their own open data	Datasets Four different countries so far. Strongest in UK	Self-assessment with guided questionnaire. Reports 'level' of open data quality.
Open Data Compass	Focussed on the availability of open corporate, litigation and media information worldwide	Countries Global	Quantitative score based on researcher assessment of data sources

Name	Description	Scope	Methods
Open Data Index and Census	Annual ranking of countries based upon whether key datasets from government (ie mapping, elections) are available as open data	Datasets Open Data Index solely analyses datasets released, not taking into account organisational context or wider reuse community. 94 countries in 2014 index.	Quantitative score Crowd-sourced with expert review to create an annual index Analyses only data type and category of data released by government
Open Data Inventory	A multidimensional assessment of data coverage and openness on NSO websites	Countries, focusing on National Statistical Offices (NSOs) Prototype under development will be applied to approximately 140 low- and middle- income countries	Quantitative score Information collected from websites of NSOs Expert assessment based on defined protocol and scoring rubric
Open Data Monitor	EU project focused on automated assessment of open data	National open data catalogues 226 data catalogues, 28 European countries	Automated analysis of data portals providing 'real-time' statistics. Methods under development.

Name	Description	Scope	Methods
Open Data Readiness Assessment (ODRA)	In-depth country assessment designed to analyse how well a government is prepared before its open data initiative launch	Countries ODRAs have been used very widely and implemented in most developing countries that have open data initiatives	External assessment by consultant based upon qualitative interviews, workshops with key personnel. Results feed into a scoring system that then produces recommendations. Analyses organisational capacity + data management release process
Open eGovernance Index	Measures ability of the different actors of the political system, including governments, business and civil society, to participate in decision making in society, through the use of information and communication technologies	Countries but currently in Pakistan	Measured on six dimensions: meshed eGovernment, eParticipation channels, digital inclusion, ICT-empowered civil society, open access to data, information and knowledge and communication rights
Open Government Index	Measures government openness based on general public's experiences and perceptions worldwide	Global	10,000 household surveys and in-country expert questionnaires

Name	Description	Scope	Methods
OUR Data index (OECD)	Assesses government efforts to implement open data in three areas: openness, usefulness, and re-usability	35 countries (OECD + Colombia)	Government Survey. Assessment based on quantitative data gathered through a survey completed by national government representatives.
RTI Ratings	Measures the legal framework for the right to information, not implementation	89 countries	Quantitative score based on 61 indicators: analyses right of access, scope, requesting procedures, exceptions and refusals, appeals, sanctions and protections, and promotional measures
The Social impact of Open Data	A comprehensive measurement of the effect of open data on society	Countries	Outcome Mapping (OM) is an approach to planning, monitoring and evaluating social change initiatives developed by the International Development Research Centre in Canada. It provides a set of participatory tools and guidance for teams to identify the desired mid- to long-term change they are seeking to achieve, and how they will work collaboratively with internal and external stakeholders to bring it about. It also provides a way of measuring progress milestones of an initiative or programme

Name	Description	Scope	Methods
UN E-Government Survey	An assessment of how governments use Information and Communications Technology (ICT) to provide access and inclusion for all The 2014 E-Gov Survey includes questions on open data	Countries National web portals OF 193 countries	Desk research with structured survey. Quantitative data.

Table 2: Classification of assessment tools

Name	Level of analysis	Classification	Justification
Common Assessment Framework	Countries	Capabilities/ implementation/ impact	The Common Assessment Framework suggests that open data assessments take into account context, data, impact and use. The framework measures readiness as it takes into account the legal and governance context of an initiative and the extent to which it may succeed. By measuring data, impact and use, the framework also assesses open data implementation and impact.

Name	Level of analysis	Classification	Justification
European PSI Scoreboard	EU countries	Implementation/ impact	The European PSI Scorecard is a crowdsourced indicator that measures implementation of government policies. It also captures information on the impact of these policies through indicators on the reuse of open data, and events and activities organised around on themes of open data.
Maturity Model and Pathway	Organisations	Implementation/ impact	The Open Data Maturity Model measures the implementation and impact of open data initiatives. It assesses how organisations publish and consume data based on five themes, data management, knowledge and skills, customer support and engagement, investment and strategic oversight.
Open Data 500	Companies in the United States	Impact	The tool studies the use and impact of open data.
Open Data Barometer	Countries	Capabilities/ implementation/ impact	The Open Data Barometer relies on primary and secondary data to assess all three stages of the cycle
Open Data Certificate	Dataset	Implementation	Although not strictly an assessment tool, the Open Data Certificate is a portal where users can certify data as open. It assesses the quality of open data but does not compare open data across different levels of analysis. It is classified under implementation because it analyses whether open data has met a particular standard.

Name	Level of analysis	Classification	Justification
Open Data Impact Map	Organisations	Impact	The Open Data map is set to be launched in 2016, but its 'beta' version provides information on data use across sectors in countries.
Open data in government: how to bring about change (paper)	Governments	Capabilities/ impact	'Open data in government' predominantly assesses readiness. It contains several steps that governments could follow to plan open data initiatives. However, one of these steps involves collecting information on the impact of the initiative and, as a result, it can also be classified under impact.
Open Data Index and Census	Datasets	Implementation	The Global Open Data Index measures whether a country releases key types of open data. It measures the status of open data in a country by examining whether countries release ten key datasets and evaluating their quality.
Open Data Inventory	Countries	Implementation	Like the Global Open Data Index, the Open Data Inventory assesses the quantity and quality of data provided by National Statistical Offices (NSOs)
Open Data Readiness Assessment (ODRA)	Countries	Capabilities	Open Data Readiness Assessment (ODRA) is a methodological tool that exclusively measures the readiness of a government to plan and implement an open data initiative

Name	Level of analysis	Classification	Justification
Open eGovernance Index	Countries	Capabilities/ implementation	The Open Government Index is similar to the Right to Information ratings as both assess the legal context, or capabilities of governments to implement open data initiatives. Unlike Right to Information ratings, the Open Government Index also measures aspects of implementation, like complaint mechanisms and civic participation.
OUR Data Index (OECD)	Countries	Implementation	The OECD OUR Data Index restricts itself to measuring implementation on three criteria, openness, usefulness and the usability of government data
Right to Information Ratings	Countries	Capabilities	The Global Right to Information Rating restricts itself to measuring the legal framework for freedom of information in a country. It is listed under capabilities as it measures the context, and not the quality of implementation or impact.
The Social impact of Open Data	Country case studies	Impact	This paper is based on qualitative methodology and analysis of secondary data. It compiles case studies that demonstrate the impact of open data use.
UN E-Government Survey	Countries	Implementation	The UN E-Government Survey ranks member states on the status of Information and Communications Technology in their governments. Although not strictly an open data assessment, the index includes several indicators that measure transparency, openness and data sharing.

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