AFRICA DATA REVOLUTION - RESEARCH HANDBOOK

Iglesias, Carlos;

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Africa Data Revolution Report
Open data Readiness, Use and Impact

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Welcome to the Africa Data Revolution Report Handbook and thank you for participating in this study. This guide introduces the assessment process, including information on the methodology and **detailed question-by-question guidance** to be consulted as your work through the research process. The most updated online copy can always be found online.

The main aim of this handbook is to provide consistent referencing as a way to **minimize individual interpretations** and confusion when identifying the most appropriate assessment for each country on a given expert survey indicator.

This research project has three main components: (I) *open data readiness*; (II) *data use and impact*; and (III) *data availability and openness*. This handbook focuses on the first couple components. You will also find another handbook on how to assess the availability and openness of data for the third component. A quick start guide for the research survey tool is also available.

Before starting it is also important to familiarise yourself with the concept of **open government data** and the open definition fully. Further detailed information can be found in the Open Data Charter Principles.

SECTION 1 - RESEARCH METHODOLOGY

A country researcher is expected to perform desk research and consult with key informants to assess the each of the indicators in the study. Those initial assessments are then reviewed by a peer-reviewer, who may flag certain questions for additional research, correction or clarifications based on the standards described in this handbook. Project management will check all reviewer feedback to determine which indicators need to be returned to the lead researcher for further strengthening. This back-and-forth process will lead to a final set of well-researched and well-sourced indicators.

Several questions in this survey can be answered drawing upon online sources, published materials and desk research. In other cases you may need to interview or consult with open data experts, NGOs, journalists, government officials or any other actors to identify the appropriate answer to a question. In that cases you must explain clearly to these sources that you are undertaking research for the next African Data Revolution Report and any responses they give may be placed in a public open dataset.

Scores

There will be 11 score choices from 0 to 10 (both included) and above 0, 3, 5 and 8 incremental scoring guidelines containing detailed scoring criteria to guide the researchers in their selection of the most appropriate score. **Allocating a score of 10 for an indicator (question) for a country should be very rare**. A score of 10 would imply virtually no room for improvement, which is not likely to be the case in the large majority of cases. Similar due care should be exercised when allocating a score of zero for an indicator. In both cases, the evidence needs to be very strong in support of scores at the extremes (both, 10 and 0).

Justifications

For every question it is very important that researchers provide a brief and reasoned argument to explain the score choice as well as details of the sources used to answer that question. This will support reviewers to check the answers given. You should always provide a justification, even when scoring a question zero (0). In these cases you must explain how you tried to locate the details requested in the question. For example, describe the searches you tried to find an open data policy or a particular dataset which ended with no evidence of a policy or that dataset being available.

You must provide your justification, sources and notes in English[1]. The resources linked to can be in other languages, and you should research and search for sources in the official languages of the country you are researching wherever appropriate. These **justifications should be written in clear prose, and neutral impersonal way,** avoiding the use of first

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[1] Please, use at minimum a grammar and spell checker tool before introducing the results into the survey tool if you need so.

person in the redaction**.** You need to **create your own justifications based on the findings**, using content quotations when needed to support your argument but not relying solely on them**. All justifications need to be self-contained and self-explanatory**, with no cross-references between any of them.

Sources are intended to support and supplement our justifications, but **one should be able to fully understand the justification without looking at the sources. Numerical footnotes in (semi-circle brackets) within the text** will be used to indicate the relevant sources used, with sources listed at the bottom of the text box. Please, **follow the specified format narrowly**:

Example of justification formatting:

A justification might refer to multiple web pages **(1)** to support the claims made. Include dates of access for the web links. At the relevant point in the justification text you can include footnote references, following the indicated standardised format **(2)**. It should be possible for a reviewer to easily locate all the sources you cite, or to understand the evidence you have to support each statement in your justification.

This keeps the justification prose clear, and ensures that all sources are listed in one place at the bottom of the justification box **(3)** starting with a couple of sharp signs (##) Sources header.

Use quotes sparingly. Good justifications rarely exceed three to four paragraphs, and can often be shorter and more concise.

Using semi-circle brackets means that the markdown processor used in the survey tool **(4)** will not distort the formatting of your content when displaying it to a reviewer.

Sources

(1): http://en.wikipedia.org/wiki/Web_page

(2): University of Chicago Press, 2010. The Chicago Manual of Style, 16th Edition.

(3): Skype interview with Hania Farhan, Web Index Team.

(4): http://daringfireball.net/projects/markdown/

SECTION 2: QUESTIONS AND STRUCTURE

This research builds on previous Open Data Barometer methodology with some modifications and methodological revisions in order to further adapt it to the African context. Overall, however, we have sought to maintain certain consistency with the questions used in the Barometer. In

any case, please read the question guidance carefully in each instance and in case you have any doubt don't hesitate to contact the project coordinator at carlos.iglesias@webfoundation.org

Our readiness assessment will be based on the Open Data Charter principles. There are many other policy areas that can overlap with open data. However, for our context analysis it is important to understand that open data is conceptually **distinct** from:

- **Open government** - whilst an open government policy might mention open data, the two are not identical. Always check for explicit discussion of open data while working with open government references;

- **E-government** - policies to place government services online *might* have an open data element to them, but in many cases they only give citizens access to specific services or small extracts of data, rather than providing full access to machine-readable data;

- **Data sharing** - governments may increase data sharing between departments, but with limits on whom the data is shared with, or who can re-use it. It is only open data when anyone can re-use it without restrictions;

- **Open Access** - open access focuses mainly on access to (academic) documents and publications rather than full datasets.

R1) To what extent is there an active and well-resourced open government data initiative in the country? [ADRR.2018.R.INIT]

Evidence and scoring criteria and thresholds:

Score > 0	● There should be evidence of at least any **explicit commitment from government to release open data** in a near future - or any official websites, documents or guidelines referencing global open data practices in the country - although no formal open data policy or strategy may be yet in place.
Score > 3	● There is some alignment between the national development plans and the global Sustainable Development Goals (SDGs). ● There should be evidence of a **national data catalogue**, a statistics catalog, a central data portal or a SDGs reporting platform providing easy access to datasets available for re-use in one place. Access to the data could be provided directly on the catalogue or just indirectly through

	pointers to the final place where the data is located.
Score > 5	● There should evidence of some **small-scale open government data pilot(s)** - a programme by any of the government agencies to promote the release of government data online - even when not completely resourced yet. ● **A junior minister or single ministry is making commitments to increased government transparency**, and/or some commitments to open data. ● General **open data training and awareness programmes for civil servants** are available to ensure they are capable of using (open) data effectively.
Score > 8	● There should be evidence of a **strong and consolidated cross-departmental national open data initiative with significant resources behind it**, including dedicated staff and allocated budgets. ● There should be evidence of **a documented national open data policy or strategy** that articulates *processes, responsibilities, timelines and resources* and a national institution or authority is in charge of its execution. ● There is **explicit commitment to open data from a senior government figure** (e.g. Cabinet minister) and/or parliamentary backing for an open data initiative. ● The government team regularly shares experience and/or technical expertise with other governments and/or international organizations or similar initiatives around the world (e.g. the Open Data Charter or the Open Government Partnership)

Research Guidance

Governments need to develop strategies, action plans and policies in support of their implementation of the open data principles. Strategies will typically be high-level plans focused on the particular long-term goals, actions and resources for success, while action plans and policies will define specific courses of action adopted to guide decisions towards implementation. Our open data reference principles are those proposed by the Open Data Charter:

> Principle 1: Open by Default;
> Principle 2: Timely and Comprehensive;
> Principle 3: Accessible and Usable;
> Principle 4: Comparable and Interoperable;
> Principle 5: For Improved Governance and Citizen Engagement;

Principle 6: For Inclusive Development and Innovation.

Look for evidence of **an explicit government commitment to open data**. An open data initiative is a programme by the government to release government data online to the public. It has four main features:

1. The government discloses data or information without request from citizens. This may be according to a release schedule or *ad hoc*.
2. The Internet is the primary means of disclosure (including mobile phone applications);
3. Data is free to access and reuse, e.g. open licenses;
4. Data is in a machine-readable format to enable computer-based reuse, e.g. spreadsheet formats, Application Programming Interfaces (APIs), etc.

Significant resources for an open government data initiative include a sufficient budget, personnel and facilities to carry out the mandate of the open data initiative, including technical personnel with appropriate qualifications for dealing with open data issues.

Note that this question is only concerned with initiatives led by the **national government**. Open data initiatives covering the country, but organised by a third party, such as the African Development Bank or another regional organisation should not be counted, although you can detail these in the *'Additional notes'* section.

Source Guidance

- The existence of government open data action plans, policies or directives;
- The existence of supranational open data policies or directives affecting the country;
- Speeches by government leaders about open data;
- Conversations with government and civil society members of the open data movement;
- Conversations with the "civic hacker" community;
- Open Government Partnership country action plans that contain explicit commitments to open data. See also the specific Open Data Charter commitments as well as the general database of commitments and progress report;
- Reports published by the media, academic and policy journals, and development and multilateral bodies (e.g. World Bank, IFC, OECD, African Development Bank).
- Regional reports such as the the Status of Open Data Initiatives in West Africa, the African Open Data Conference Report, the African Data Revolution Report, or the ICT policies database in Africa.
- Lists of known Open Government Data portals such as Open Data Inception.
- Regional open data communities, such as:
  - The Chapters and Groups of the Open Knowledge Network;
  - The Africa Open Data, Open Data for Africa, Open Data Francophone, Open Government in the Arab States, Data-Driven Innovation in MENA and Open MENA networks.

R2) To what extent is there a consistent (open) data management and publication approach? [ADRR.2018.R.MANAG]

Evidence and scoring criteria and thresholds:

Score > 0	● There should be at least some minimal description of the published data through the **provision of a descriptive narrative**, even when it may be used in an inconsistent way across different agencies or departments.
Score > 3	● There should be **shared minimal common and standardised core metadata elements** used across government (e.g. title, data source, publication date and format) ● Regular public **consultations on the user's data needs and preferences** are conducted (through online systems, social media, workshops, etc.), as well as when there are significant changes in the structure or supply of data already published. Requests are being addressed and responded.
Score > 5	● There is a set of **general guidelines and standards** (including *high priority data, metadata, data models, data interoperability, formats, licenses, codelists and/or identifiers*) **for the publication of (open) government data**. A basic general data management methodology from the National Statistics Office could also count to certain extent. ● Consistent information lifecycle management practices are applied, ensuring that the data is being kept **regularly updated** and **historical copies of datasets are preserved.** ● Comprehensive **machine readable metadata is regularly provided** in a format that could be easily re-used.
Score > 8	● **Multiple format options are usually available** for each of the published datasets - both, human and machine-readable. ● There should be **a single and exhaustive (open) data inventory** for the central government, ideally including also justifications for data not to be released. ● There should be **a standardised release process for the publication of data sets**, addressing also future updates. Data publishing processes are documented and shared online and user's guides for reference data are available. ● There is a **quality control process for the data** covering various aspects such as *completeness, granularity, timeliness, persistence*, etc. User's feedback on the quality of data published is also requested.

Research Guidance

When releasing data, no matter whether they could be considered strictly open or not, one should aim to do so in an uniform way across the different agencies and departments to help people to use and understand them. Data needs to be fully described, as appropriate, to help users to fully understand the data. Following the recommendations of the Open Data Charter, this may include:

- Implementation of consistent, open standards related to data formats, interoperability, structure, and common identifiers when collecting and publishing data;
- Consistent core metadata;
- Information to understand the source, strengths, weaknesses, and analytical limitations of the data;
- Accompanying guidance documentation that is written in clear, plain language; and
- Being transparent about data collection, standards, and publishing processes by documenting these processes online.

At the same time, governments need to listen to feedback from data users to improve the breadth, quality and accessibility of data they offer. This could be in the form of a public consultation, discussions with civil society, creation of a feedback mechanism on the data portal, or through other appropriate mechanisms.

Source Guidance

- The existence of government data management and/or publication guidelines and data standards policies;
- Documentation of official open data catalogs;
- Evidence of adoption of international reference metadata and data standards (e.g. DCAT, DCAT-AP, oData, Best Practices for the Publication of Data on the Web, etc.);
- Conversations with members of the open data movement, both government and civil society;
- Conversations with government officials working in open data offices or projects;
- Conversations with the "civic hacker" community;
- Conversations with data entrepreneurs and researchers;
- Reports published by the media, academic and policy journals, and development and multilateral bodies (e.g. World Bank, IFC, OECD, African Development Bank, African Data Revolution);
- The ICT policies database in Africa.

R3) To what extent is there a robust legal or regulatory framework to support data openness implemented in the country? [ADRR.2018.R.DPL]

Evidence and scoring criteria and thresholds:

Score > 0	- There should be evidence of **legal or regulatory policy to promote data protection** of some form or policy statements have been made that this issue will be addressed in government policy, although implementation remains weak. - There should be evidence of some form of **legal or regulatory right to information/freedom of information from government** or policy statements have been made that this issue will be addressed in government policy, although implementation remains weak. Alternatively, there may be a **public domain status for Public Sector Information enshrined in the copyright law**.
Score > 3	- There should be evidence that **the legal or regulatory policy that promotes data protection is concise and useful in practice**. some cases where it was used and applied should be provided. - There should be evidence that **the legal or regulatory right to information/freedom of information law is responded to when there are requests for the information**, although the response time may be slow and the quality of the information provided may not be as requested.
Score > 5	**Right to freedom of expression** is also respected by protecting those who use government (open) data and information to identify corruption or criticize governments. - A **dedicated agency exists to deal with information enquiries** and to adjudicate cases or request for information from government that are refused. Response rate from this agency is fairly prompt (within a few months).
Score > 8	- There should be evidence that **the legal or regulatory law that promotes data protection not only exists but has also been implemented in practice**, provides the *right of choice/consent to individuals*, provides the *right to access and/or correct one's personal data* and/or imposes *clear responsibilities on information holders*. - In accordance with privacy legislation and standards, **data is anonymised prior to publication**, ensuring that sensitive, personally-identifiable data is removed beforehand. - There should be evidence that **citizens generally receive responses**

	to requests for government information within the legally stipulated time as governed by the RTI / FOI law and at the cost defined by law. The responses are typically of acceptable quality. ● There is **a redress mechanism for data protection** against both, private and public bodies that violate data privacy, with a dedicated agency. This role is taken seriously and there is evidence of its work being effective and respected.

Research Guidance

The **data protection** indicators address whether the country's data protection regime is not only available, but also implemented in an "effective" way. The basic requirements for strong data protection regimes include the key features noted below:

(1) **Broad applicability** – these rules should apply to personal data sets and data controllers in both the public and private sectors.

(2) **The right of choice/consent** – Individuals should normally be given the choice of whether their information is collected. There should be only limited exceptions to this where there is an overriding interest, defined in law, in the collection of such information. This implies that individuals understand and are given clear notice of a public or private body's information practices before any personal information is collected. This notification should describe what information is proposed to be collected and held, who will collect it, how the information will be used and who will have access to it. It should also be clear to the subject whether the provision of the requested information is voluntary or required by law and of the consequences of refusing to provide the requested information. Information should not be used for purposes that are incompatible with the use for which the information was originally collected.

(3) **The right to access and correct** – Individuals should have the right of access to any information held about them at reasonable intervals and without undue delay. They should also have the right to require the data controller to correct any inaccuracies or to delete the data, where appropriate.

(4) **The responsibilities of information holders** – Data controllers must take reasonable steps to ensure that the information they hold is accurate and secure. Access to the data should be limited in accordance with the established uses of the data. Transfers should be made only to third parties that can ensure similar respect for data protection principles. Data should be destroyed once the information is no longer needed for the established uses, or converted to anonymous form. While information is held, appropriate steps should be taken to ensure the confidentiality, integrity and quality of

the data.

(5) **The right of redress** – Individuals should have the right of redress against public and private bodies that fail to respect data protection rules in relation to data about them. Remedies can be provided through self-regulation, private law actions and government enforcement. Oversight of the system should be undertaken by an independent body.

The **right to information/freedom of information** indicators address whether the country's disclosure requirements are not only available, but also implemented in an "effective" way. The basic requirements for them to be considered "effective" are whether information is:

A. available to the public for free or at reasonable/minimal costs in a variety of venues (e.g., online, government agency offices);
B. can be accessed by citizens within a timeframe as defined by the law; and
C. answers the specific request, with explanations for refusal to release information.

For a perfect RTI/FOI there can be exceptions in which information is not released to protect national security or public interests clearly prescribed by law (e.g., medical records, sexual orientation, etc.), but the legal reason must be stated clearly in the response from the government to the citizen who requested the information. Proactive publication with reusable formats is also required.

Source Guidance

Privacy
   ● This 2012 paper about Global Data Privacy Laws provides a list of 89 countries with data protection laws and the names of the laws to assist in researching whether a law is effectively implemented;
   ● The State of Privacy Briefings from Privacy International.
   ● National and supranational data protection legislation;
   ● Interviews with senior officials from the information commission or data protection commission;
   ● Interviews with NGO officers with expertise in data protection and access-to-information issues and also investigative journalists;
   ● Experts in data privacy, information privacy or access to information, such as academics, researchers and think tanks;
   ● News and reports published by the media, academic and policy journals, and development and multilateral bodies (e.g. World Bank, IFC, OECD, African Development Bank).

RTI
   ● Non-exhaustive databases of right-to-information laws: RTI Rating, Constitutional provisions, laws and regulations, Public Accountability Mechanisms and the ICT policies

database in Africa;
- The Access to Information Commitments in OGP Action Plans. See also the database of commitments and progress report;
- Regional analysis such as the Global Integrity Access to Information & Openness or the State of Right of access to Information in Africa Report;
- freedominfo.org as the one-stop portal that describes best practices and links the efforts of freedom of information advocates around the world;
- Interviews with NGO officers with expertise in access-to-information issues and investigative journalists;
- If there is a national agency in charge of handling appeals to denials for request of information, then researchers should interview government officials who work for this agency to obtain a sense of the conditions in which an agency denies (or grants) information;
- Reports published by the information agency, media reports and publications by development/donor agencies;
- The Principles on national security and right to information;
- Freedom of the Press index ranks 180 countries according to the level of freedom available to journalists.

R4) To what extent is government engaging with civil society, academia and/or information technology professionals regarding (open) government data? [ADRR.2018.R.CSOC]

Evidence and scoring criteria and thresholds:

Score > 0	● There should be evidence of **some minimal demand or use of (open) government data** by civil society, academia and/or information technology professionals, but these actions may come exclusively from an **active developers community** (e.g. open source community) or **other civil society groups** with no government support.
Score > 3	● There should be evidence of **some data users' engagement and interaction**, even when it may be basically just through the use of *online services* to interact, communicate and reach out to the community in general (e.g. *blogs, website, social media*, etc.) ● There should be **a range of interventions to support a culture of data innovation**, including *challenges, hackathons or informative sessions*, but **government is not directly involved** and its support may be only testimonial if any.
Score > 5	● **The government shows some irregular but proactive efforts towards engagement**, such as specific *public consultations* or

	communication strategies designed to make civil society aware of the benefits and possibilities of (open) data. ● There are **examples of innovation initiatives** that have the **support and participation of the government,** such as *hack days, competition events or co-creation sessions* within the year that foster the development of datasets, *visualizations, applications*, and other tools based on government data. Two or more different departments or agencies are actively involved in running these actions. ● There should be evidence of **coordinated civil society campaign(s) calling for more (open) government data** or working with governments to promote data openness and create value.
Score > 8	● There is at least **one regular national or inter-regional event** with government participation that serves as a forum for the discussion of the status of data publication in the country. ● There should be **significant financial or functional incentives to create new services and supporting a range of different activities supporting innovative uses of government data**, such as *incubators, funding schemes, labs and open data boot camps*. ● **Public-private partnerships**, with civil society, private sector organizations or other multilateral institutions, **are being explored** to support the release of (open) government data and maximize impact through effective use and data collaboratives. ● **Non governmental organizations are starting to contribute to the enrichment of government data** with new data collected by them.

Research Guidance

Campaigns for open data are often composed of civil society organizations, data technologists, informational professionals, computer experts, academia and ordinary citizens who advocate for greater access to government data. We need **a short description of the current ecosystem, including who specifically are the current main stakeholders**.

Governments can adopt a range of approaches to stimulate a culture of innovation around open data including:

- Running competitions in which prize money is offered to innovators creating tools, services or commercial applications using open data;
- Organising hackathon events which invite developers to create prototype tools and services over one or two day events;
- Organising *incubators, labs and open data boot camps* specifically targeted at supporting innovative uses of open data;

- Offering grant funding or innovation vouchers specifically targeted at encouraging businesses to engage with open data;

Lower scores are compatible with one-off activities and interactions organised with minimal budgets and focused only on one of the groups, but higher scores require broader interaction involving all the different groups. A perfect score indicates that government officials recognize these organized campaigns, dedicates investment to support innovation and engage regularly in discussion with community leaders and representatives from **all** these different groups about which data to release, when and in what forms, exploring also other collaborations.

Source Guidance

- Online evidence of an open data community, including reports of events and other activities;
- Conversations with open data specialists in civil society organizations or individuals who are directing open data campaigns, open data activists, government officials involved in open data, or entrepreneurs working on open data in the country;
- Conversations with government officials working in open data offices or projects;
- Conversations with NGO officers with expertise in open-data and access-to-information issues, and investigative journalists;
- Search for government press releases and announcements about support for open data innovation activities;
- Search for donor press releases, project funding documents and announcements of support for open data innovation activities;
- Search for 'hack days', 'open data boot camps', 'open data competitions', 'open data challenges' 'open data hackathons' 'data labs' 'innovation labs' and check to identify if any of these were supported by government;
- Reports published by the media, academic and policy journals, and development and multilateral bodies (e.g.: Web Foundation, Open Knowledge Foundation, Sunlight Foundation, etc.)
- Global open data innovation events and programmes such as the annual open data day;
- Research and innovation networks such as the Open Data Research Network the Open Data for Development Network and the Open Data Innovations Network;
- Regional open data communities, such as:
  - The Chapters and Groups of the Open Knowledge Network;
  - The Africa Open Data, Open Data for Africa, Open Data Francophone, Open Government in the Arab States, Data-Driven Innovation in MENA and Open MENA networks.

OPEN DATA USE AND IMPACT QUESTIONS

These questions ask you to assess the degree to which there is any evidence that (**open) data release by the country government** is being used and/or has had impacts in a variety of different domains in the country. **You should look for as many examples of uses cases and user stories as you can** for each of the sectors in this section. Note that, even in the case **when a given country may not have any official open data initiative yet some data use or impact is still possible** coming from government data that could have been released by any other means.

A side note on 'impact'

Measuring impact is notoriously difficult. Establishing a solid causal connection between open data and particular changes is clearly beyond the scope of a survey such this one. However, for the purpose of this study, claims made in credible sources concerning possible impacts of open data are a useful proxy indicator of areas in which impact may be occurring, and to allow initial comparison between countries.

Claims about impact go beyond simple descriptions of where (open) data has been used. For example, a newspaper might report that open government data has been used to create a bus timetables application, to visualise the budget of the country, or in a hackathon focussed on public services. It is only when they relate this to some other outcome, such as budget savings, or an increase in use of public transport, that an impact claim has really been made.

You should carefully check to ensure the use and impacts you cite can be reasonably attributed to open government data from the country in question and released by the national or federal government. For example, a crowdsourcing application created by an NGO to monitor public services may contribute to more efficient government, but if it does not use data from government then, for the purposes of these assessment, you should not include it in your analysis. By contrast, if a government publishes data on its spending, and there are cases of third-parties using this to highlight where government could use its resources more efficiently, this would count as a case where impact could be cited from open government data.

Where examples draw on open data from outside the country (e.g. an ICT based in the country is using open data from the World Bank, some other government, or some global dataset) or city level data you may report this as part of your justifications and sources, but these examples should not count towards high scores, as higher scores are only available where the data being used comes from the national government's open data releases.

The top scores should only be given where at least one credible peer reviewed article clearly attributes measurable impacts to open data *and* there are further cases of use or impact in other credible media sources and blog posts etc. from **at least three different sectors** (e.g. health, education, transport).

U1) To what extent has open data had a noticeable use and/or impact on increasing government efficiency and transparency? [ADRR.2018.UI.GOV]

Scoring Criteria

10	5	0
Government data is widely cited to have made a significant contribution to government efficiency or transparency, with rigorous evidence to back these claims: for example a peer-reviewed study or government audit showing the impact of open data to government efficiency or transparency.	Three or more use cases in the media or other credible online or offline sources where government data is cited to have contributed to increased government efficiency or transparency.	No evidence of use or impact of government data on increasing government efficiency and transparency.

Research Guidance

Open data could lead to improvements in government **efficiency and effectiveness** in a number of ways:

- By enabling government departments to better plan and target resources;
- By allowing outside actors to scrutinise government use of resources and highlight areas for savings;
- By enabling outside actors to build new services on top of open data which deliver more effective public services;
- By supporting collaboration between different government departments;
- By conducting data analytics to identify patterns and develop new data-driven approaches to more informed policy making and service delivery;
- By cross linking data between different public agencies to produce shared content, services and policies among administrations.

Open data could also lead to improvements in government **transparency and accountability** in a number of ways. Examples include applications to leverage open data around budgets, expenditure tracking, procurement, taxation and policy making, as well as accountability mechanisms such as financial disclosure, conflict-of-interest restrictions, audit systems and anti-corruption efforts, or others like:

- Supporting journalism and data journalism which uncovers wasteful spending, corruption or other wrongdoing by government departments or officials;

- Supporting the creation of applications which allow citizens to report on their experience of government services (for example, when a directory of schools or hospitals helps third-parties build a school or healthcare performance reporting application for citizens);
- Supporting scrutiny of government decision making;
- Supporting greater citizen engagement in policy making.

You may find other ways that open data impacts government efficiency and/or transparency in addition to these.

Source Guidance

- Conversations with open data experts, government officials, NGOs and media;
- Reports and case studies from government departments, international organisations and NGOs;
- Media reports from domestic or international media;
- Blog posts and forum discussions;
- Research and innovation networks such as the Open Data Research Network Open Data for Development Network and the Open Data Innovations Network;
- Repositories of research journals, such as Google Scholar or the Open Data Research Network Bibliography;
- Repositories of open data impact case studies and use examples such as Open Data's Impact, the Open Data in Developing Countries report, the Open Governance Research Exchange, the Open Data Impact Map or those curated by the GovLab.

U2) To what extent has open data had a noticeable use and/or impact on increasing the inclusion of marginalised groups in policy making and accessing government services? [ADRR.2018.UI.INC]

Scoring Criteria

10	5	0
Government data is widely cited to have made a significant contribution to the inclusion of marginalised groups, with rigorous evidence to back these claims: for example a peer-reviewed study showing the impact on greater inclusion of at least one marginalised group.	Three or more use cases in the media or other credible online or offline sources where government data is cited to have allowed marginalised groups to participate in either policy making, or accessing government services.	No evidence of use or impact of government data on increasing the inclusion of marginalised groups in policy making and accessing government services.

Research Guidance

All societies have certain groups who are marginalised. **This may be on grounds of *age, gender, race, tribe, caste, class, disability, geographic location, literacy, and levels of poverty or inequality* in general.** Whilst these groups are not explicitly prohibited from accessing and using government data, they may not always be able to have effective access to open government data.

It has been argued however that open data can lead to more inclusive policy making and government services. This may happen through the direct use of government data by marginalised groups, or through the work of intermediary organisations who support marginalised groups to access and use data, or who use data to campaign for the greater inclusion of marginalised groups in decision making or in receiving the benefits of public services.

Source Guidance

- Conversations with open data experts, government officials, NGOs and media;
- Reports and case studies from governments, international organisations and NGOs;
- Media reports from domestic or international media;
- Blog posts and forum discussions;
- Research and innovation networks such as the Open Data Research Network the Open Data for Development Network and the Open Data Innovations Network;
- Repositories of research journals, such as Google Scholar or the Open Data Research Network Bibliography;
- Repositories of open data impact case studies and use examples such as Open Data's Impact, the Open Data in Developing Countries report, the Open Governance Research Exchange, the Open Data Impact Map or those curated by the GovLab

U3) To what extent has open data had a noticeable positive use and/or impact on the country economy and entrepreneurship? [ADRR.2018.UI.ECON]

Scoring Criteria

10	5	0
Clear rigorous evidence of a contribution of government data to a range of forms of new economic activity and/or economic growth and/or entrepreneurship and/or new businesses; for example, a peer-reviewed study showing a positive impact on economic growth across a number of sectors. There are several	Three or more use cases in the media or other credible online or offline sources where government data is cited to have contributed to economic growth and/or entrepreneurship in at least two different sectors. There are some examples of commercial apps, websites or other businesses built with open	No evidence of use or impact of government data on the country economy and entrepreneurship.

examples of new businesses based around open data, employing staff and/or attracting significant external investment.	government data. These remain niche or small scale businesses.	

Scoring Guidance

Open data may impact on the economy in a number of ways. For example:

- Through supporting existing businesses to lower their costs or become more efficient (for example, using weather or transport data to better plan their operations)
- Through supporting better economic planning.

You can also read about a range of existing open data business models. An entrepreneurial use of open data involves a company that:

- Earns revenue from its products and services, and
- Use open government data as a **key resource** for its business.

Be careful to distinguish business based on **open government data** (explicitly citing certain open datasets as a key input into their work) from businesses based around *open source software*. Open source software is distinct from open data, and open source businesses do not count for scoring.

There are also many articles concerning the potential contribution of open government data to economic growth, but for top scores, studies or credible sources cited should be about actual observe economic growth, rather than forecasts of potential economic impacts from open data.

Source Guidance

- Conversations with businesses, open data experts, government officials, NGOs and media;
- Reports and case studies from government departments, international organisations and NGOs;
- Media reports from domestic or international media;
- Blog posts and forum discussions;
- Research and innovation networks such as the the Open Data Research Network, the Open Data for Development Network and the Open Data Innovations Network;
- Repositories of research journals, such as Google Scholar or the Open Data Research Network Bibliography;
- Repositories of open data impact case studies and use examples such as Open Data's Impact, the Open Data in Developing Countries report, the Open Governance Research Exchange, the Open Data Impact Map or those curated by the GovLab.