

## Methods and criteria for assessing online budget transparency in OBS countries

*Proposal developed by Fundar, Center for Analysis and Research  
for the International Budget Partnership – May 2015*

In January 2015, the International Budget Partnership (IBP) commissioned a review of available online fiscal data appraisals and the adaptation and formulation of a set of criteria for assessing and comparing how governments from countries participating in its *Open Budget Survey* (OBS) make fiscal information available on the Internet. The objective identified by IBP is to assess the quality and content of the different types of websites and portals used by governments to disclose budget information, to identify elements of 'good practice' in this area that warrant specific recommendations for governments, and to develop an illustrative comparison between countries with similar systems and practices.

This brief report presents the findings of a team of experts convened by *Fundar, Center for Analysis and Research* to develop these criteria and methods. In sum, we are proposing an assessment of two relevant dimensions of online fiscal transparency: the website or portal itself, and the information it includes. These dimensions would be assessed using four criteria: scope, accessibility, reliability and feedback.

The proposal is based on an extensive review of available assessments and in-depth interviews with experts and practitioners (full list of interviewees in appendix 1). It discerns, adopts and compounds the criteria used by the United Nations' e-government survey, the World Bank's *Fiscal Management Information Systems* (FMIS) assessment, and three additional independent assessments (detailed in section one, below), prioritizing key, actionable indicators that can be directly tested by researchers.

The document is divided in four sections. Section one, below, presents a summary review of available assessments considered for the formulation of this proposal. Section two proposes a detailed assessment framework and criteria, with a set of 17 specific indicators. Section three considers a specific assessment methodology for enabling direct testing of the proposed indicators and comparisons between countries. Section four explains what the assessment does not do, either because there are conditions that cannot be tested directly, or given the time constraints faced.

### 1. Existing assessment criteria for budget transparency and open data

There are two sets of standards and criteria for assessing budget transparency, one is amply developed and well established, regarding the desired characteristics of budget information and documents proper, and the other is in construction, regarding the desired characteristics of online budget disclosure practices.

As regards the first, the standards and criteria for fiscal transparency have been extensively discussed since the late nineties, on the basis of key principles outlined by the International Monetary Fund (IMF), the World Bank (WB) and the Organization for Economic Cooperation and Development (OECD). The IBP has incorporated these principles in its formal assessment of budget transparency, through the *Open Budget Survey*, and it has led the conversation forward with its support and anchoring of the multi-stakeholder *Global Initiative for Fiscal Transparency*. As a result, there is a clearly delineated set of standards and criteria for assessing transparency in the budget process, different types of budget documents and the information and detail they must contain.

These criteria do not yet consider the quality and consistency on online proactive disclosure of budget documents, but there is clear movement towards clarity on this subject. This movement has been spurred by a growing community of practice emphasizing openness in government, access to information regimes and proactive disclosure practices. Specifically, standards and criteria have been developed for open government data, and a discussion of what it would take to open budget information has ensued.

A recent OECD discussion (OECD 2014) of its ‘principles of budgetary governance’ emphasizes on-line publication and ‘open’ formatting of budget documents, using the most basic definition of open (access, download, understand and reuse—see principle 4). The WB, for its part, has carried out a detailed assessment of the way in which existing Fiscal Management Information Systems (henceforth FMIS, the platforms used for government accounting and budget control) can be used and are being used to publish reliable open budget data and promote transparency (Dener and Young Min, 2013). Other efforts to understand and assess online budget disclosure practices have taken place regionally, in Europe (Caba, Rodríguez and Lopez, 2008), in Latin America (Murillo, 2015), and in some countries, most notably Brazil (Craveiro, Tavares and Porto, 2013; Beghin and Zigona, 2014) and the United States (Davis and Baxandall, 2014). Still other assessments measure online access to open information and data *broadly*, going beyond online budget disclosure specifically, including the UN E-Government survey (United Nations 2014) and the Open Data Index (Open Knowledge Foundation, 2014).

The assessments reviewed for anchoring this methodology measure different things, in varied ways, and not all are replicable or useful for understanding online fiscal transparency proper. We have reviewed available appraisals and methods from this perspective, in order to get a sense of what components of online disclosure practices and websites are measured, and why; to understand how the characteristics of the budget process and budget documents are related to those of on-line websites and portals; and what we can measure using the means directly available to IBP, and its network of partners and researchers.

All of the assessments under review explore website characteristics and online disclosure practices. Most explore information, data and documents’ characteristics, and two explore characteristics related to the process through which users engage authorities for feedback and guidance specifically.<sup>1</sup>

### 1.1. *Assessing website characteristics*

While different in scale and methods, on the subject of *website characteristics*, all the assessments under review propose an assessment of reliability, accessibility and whether feedback mechanisms exist in the website itself (independently of how they are used, which is only assessed by the UN).

Despite its richness, scale and detail, the UN E-Government Survey is the least useful assessment for informing our research. It produces a composite index based on a battery of questions answered by experts and vetted by governments around three independently normalized components: Online Services, Telecommunications Infrastructure and Human Capital. Within the Online Services component, a set of questions explore Open Data published by governments, with a focus on seven features:

1. Existence of datasets in government portals (including sectoral datasets)
2. Existence of dedicated portals for data publishing
3. Number of different government agencies that provide datasets

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<sup>1</sup> Two of the analyses move beyond assessment of conditions and process to try to assess impact (United Nations, 2014; Beghin and Zigona, 2014), which is beyond the scope of our review, but worth noting.

4. Availability of datasets in various technical formats, particularly those that enable accessibility
5. Guidelines by government agencies describing how to make use of datasets
6. Availability of datasets on location information such as maps
7. Availability of public channels to propose new datasets

From this list, the last four components refer to criteria that can be applied to the budget information disclosed online, and broadly refer to *accessibility* and *feedback*. Whether the government has a *diversity* of available formats makes the information more accessible, as does the availability of guidelines and information maps. There is no specific information on the specific list of survey questions, answers and sources, however, so despite it being useful as a benchmark, we cannot use the information produced by the UN Survey to guide our own assessment.

The WB assessment of FMIS use for open data, on the other hand, is the most useful. The assessment explores to what extent FMI systems are used as the basis for open data publication and proactive disclosure (FMI systems are different from budget specific reports and databases; they are used for internal management and control, but they can be linked to warrant more complete and transparent disclosure practices).

The WB report identifies key indicators and informative indicators. The key indicators are especially relevant for assessing the characteristics of web publishing platforms, and they are aggregated around four criteria: existence, source/reliability, scope and content. While not all indicators are useful to our analysis,<sup>2</sup> the assessment's emphasis on sources and reliability underscores one of the key points from our discussions with experts and practitioners: when looking at website characteristics, consistency and reliability are paramount. The WB also presents criteria for *testing* reliability: whether sources of the disclosed budget data are clearly identified and linked, and whether a system name and date stamp is identified in the reports produced by online disclosure sites.

Finally, after our conversation with the report's author, he has offered to share the assessment's database with us, which would allow us to carry out independent testing or validation of our own indicators with the WB's scores. The methods used by the WB assessment are an expert survey with direct point valuation, and the results are used for aggregate comparison and formulating general recommendations. Having access to the database would allow us to do country-specific validation.

#### 1.2. *Website, data and information characteristics.*

The regional and country specific assessments depart from a different backdrop, framework, which often compounds the characteristics of the website or disclosure platform with information and 'data' characteristics that go beyond considerations of content and scope, as a result of the emphasis placed by the community of practice on the definition of 'open'.

Caba, Rodríguez and López (2008), writing just about the time a broad definition of open data was worked out, in 2007, identify six criteria for the website itself (in addition to the scope and content of the information provided): accessibility, diversification of info according

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<sup>2</sup> The informative indicators refer to specific system characteristics beyond the scope of our analysis (i.e. whether there is gender sensitive budgeting, or the FMIS supports local government reporting) and to particular types of information disclosed already collected by the OBS elsewhere, with two exceptions: an indicator assessing whether specific open budget website statistics exists, and whether there is a feedback mechanism in the fiscal / budget website. More on these in section 2, below.

to user profiles, 'navigability', ease of use and ability to download information, the possibility to access the information in different languages and 'interactivity', or feedback (Caba, Rodríguez and López, 2008 pp. 385-386). The authors produce a composite index with direct validation of each of these components.

Around the same time this assessment was carried out, in 2007, a group of lawyers and advocates produced a working definition of 'open government data' that has since become the standard. It originally included eight principles: the data should be complete, primary, timely, accessible, machine-processable, have no restrictions to use (non-discriminatory), be non-proprietary and license free (re-usable).<sup>3</sup> It has since been annotated to include seven more principles: the data should be free of cost, permanent, trusted, open by default, its format and content must be documented, it must be safe to open, and designed with public input (ibid).

Murillo, working from Latin America recently after the definition of *open* was worked out, introduces some of the criteria now considered under 'open' into his own composite index, including timeliness, ease of access, location, and one more: whether there are presentation tools (Murillo, 2015, p. 48). In addition to website characteristics, he uses two criteria present in the open data definition, that refer to the data *itself*, going beyond content and scope: 'primariness' (by which he means raw or minimally processed data), and machine readability (by which he means it is non-proprietary, scrapable and mashable).<sup>4</sup>

Craveiro and Tavares (2013), for their part, adapted the eight original open data principles to specific measurement criteria developed by Braunschweig et al. which look specifically at platform and dataset characteristics (Craveiro and Tavares, 2013, p. 23; Braunschweig et al. 2012). They test seven of the fourteen indicators developed by Braunschweig for the budget portals of the 26 state governments and the 27 largest municipalities in Brazil.

The indicators tested were standardized domain categories, standardized file formats, existence of an API (an application programming interface, which makes it possible to easily access parts of the data through automatized requests); API granularity (which makes it possible to access specific data), latest date of activity, and whether datasets are downloadable and machine-readable.<sup>5</sup>

They include five additional indicators: to test completeness, they assess whether revenue and expense information is included; to assess *primariness*, they assess whether all *categories* and *phases* in the revenue and expense information are included in the dataset; to assess *accessibility* they explore dead links, and validate whether all datasets contain information (they test for empty datasets); to assess non-discrimination they check for enrollment or registration status and finally, they test whether there is open licensing information accompanying the datasets.<sup>6</sup>

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<sup>3</sup> True to form, the definition is not in an essay or paper, but in a website with reference to additional sources. Available at <http://opengovdata.org/>. Last accessed March 1st, 2015.

<sup>4</sup> He uses 'scrapable' to describe "digital documents whose content can be identified as being suitable for further representation in machine-friendly format"; and 'mashable' as "the combination of various sets of machine-friendly data." (Murillo, 2015 p. 48)

<sup>5</sup> They steer clear of metadata indicators, which facilitate access to budget information but are not extensively applied in Brazil, and they did not test existence of guidelines and description for dataset use because they are public in Brazil, so they did not need to test whether subnational portals included this information.

<sup>6</sup> A more recent study of Brazilian open Budget portals (Beghin and Zigoni, 2014) uses a similar framework based on the eight principles, that uses almost the same criteria as Craveiro and Tavares de Sousa, with two exceptions: they test for bugs, and they use a model for assessing whether the information is machine procesable. (The Tim Berners-Lee model, available online at: <http://5stardata.info/>).

Table 1.

Open Data principle	Craveiro and Tavares de Santana Framework
1 Complete	Presence of information on revenues and expenses Standardized domain categories (SC)
2 Primary	Observation of categories and phases in revenues and expenses Standardized domain categories (SC)
3 Timely	Date of the last update in 2012 must be of 48 hours. Latest date of activity (DA)
4 Accessible	Publication on the web (valid links, not empty datasets) Downloadable Datasets (DD)
5 Machine procesable	Existence of an API (EA), API granularity: access to specific data (AG), Machine-readable Datasets (RD)
6 Non-discriminatory	Test / check the need of any special access or enrollment
7 Non-proprietary	Standardized file formats (SF)
8 License-free	Existence of licenses for data usage and if there is any restriction to them

As we have indicated above, criteria based on open data definition test two different things: platform characteristics and dataset characteristics. In addition, ‘completeness’ and ‘primariness’ can test another dimension, characteristics of the budget information *itself*, not the datasets, in which the type and narrative of the information is the relevant variable.

This is important for our assessment to discern whether and how we want to assess information characteristics both in the datasets and other documents. Because all experts interviewed emphasized the lack of revenue information specifically, we have sought indicators that consider ‘completeness’ in the way Craveiro and Tavares do, to assess whether revenue information is proactively published with the same detail and complementary information as budget information.

Another country assessment, developed to test local online budget disclosure practices in the United States (Davis and Baxandall, 2014, for the US Public Interest Research Group or *PIRG Education Fund*) takes a different approach for testing de budget information disclosed online: it assesses whether ‘checkbook’ level expenses are disclosed, and whether datasets allow specific searches (by recipient, keyword and fund); whether detailed information of economic subsidies is disclosed (including projected and actual benefits), and whether tax credits information is disclosed. The assessment incorporates a couple of open data criteria—whether the information can be searched or queried and whether it’s downloadable—but with a very specific intent. Because the authors are assessing whether the information itself is useful for monitoring, they omit consideration of the ‘open government data’ criteria, and prioritize information characteristics (level, quality) not data characteristics. In this they are similar to the World Bank assessment, which looks at very specific data and website characteristics in the broader context of *desired* information characteristics, to assess whether they relate to one another.

## 2. Proposed assessment framework and indicators

In sum, the assessments reviewed measure three different things when looking at online budget disclosure practices: the portal or online platform itself; characteristics of the *data* disclosed; and characteristics of the *information* disclosed. These characteristics are assessed using different standards, including the open data principles and other desirable conditions, mostly focused on the types of information that *should* be proactively published. Broad *information* conditions can be assessed as part of the open data principles (completeness and ‘primariness’), or wholly independently of them (as in the WB and USPIRG assessments which list types of information wholly unrelated to open principles).

Website and data criteria are not necessarily distinguished from one another in the assessments' methodologies, but the criteria either apply to testing data or to testing the platform or website itself.

The proposed assessment framework developed by *Fundar* takes all three dimensions into account and incorporates some specific criteria and indicators to test each one. We depart from the assessments using open government data principles to incorporate three of the new or 'annotated' principles, that reflect a more recent emphasis on testing *reliability*, *permanence* and *documentation*—or, as the WB assessment suggests, whether *sources are clearly identified*.

As indicated above, this was one of the most pervasive areas of concern of all experts interviewed, because changes and adjustments to fiscal information will always exist. It is important to have systems in place that afford fiscal information users the necessary means to identify when changes have taken place in the datasets they use, and why.

To underscore awareness of the fact that we are testing data, information and online platforms for disclosure or websites, we will depart from using the nomenclature of the open government data principles. Most documents referring to the open government data principles and guidelines compound *data* and *information*.<sup>7</sup> We think it is important to distinguish them to allow for different forms of assessment. Assessing *information* requires a broader understanding of the quality and *diversity* desired, while assessing datasets is more straightforward and not subject to interpretation.

We propose an assessment of four areas of interest: scope, accessibility, reliability and feedback. The first area, scope, refers to information conditions broadly, not data or websites. The second and third, accessibility and reliability, consider the desired conditions of the websites and of the data disclosed, more closely along the lines of the revised open government data principles, but also of some specific information: guidelines, sources and license information readily available in the website, that makes it easier to use. The last one, feedback, explores one specific set of conditions of fiscal disclosure websites of particular interest to ensure accountability, which is underscored as paramount by most assessments reviewed and all experts consulted—but is not always given due weight: to what extent do authorities disclosing information consult users, through specific, diverse and effective feedback mechanisms?

### 2.1. Basic definitions

**Information.** By information we mean more than just data or datasets; we mean documents that aggregate and detail specific fiscal information, definitions for making it possible to understand fiscal information (of budget classifications and levels of disaggregation) guidelines for the use of the fiscal disclosure datasets and interactive tools, and other relevant documents with important qualitative characteristics (detailed in the indicators, section 2.2. below)

**Data.** By data we mean electronically stored recordings or specific non-narrative information. Fiscal information requires data, and datasets broadly, that either have or do not have specific conditions of openness that make them easily accessible and easier to use. Most technical accessibility conditions refer to data, not information or documents.

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<sup>7</sup> And where they don't, for example in Braunschweig et al. (2012), they refer to one dimension of this larger category of information as 'metadata', because it provides parameters ordering, defining and sorting data.

**Website** or *disclosure platform*. By website we mean a set of related pages that either host or link to fiscal information and datasets, with specific technological conditions including tags, APIs, and search or query tools.

**Portal**. A 'portal' is a website designed to be a landing or first access platform and link to the relevant information, with search tools and clear reference materials for different types of users. It creates a single point of access. A portal can contain the relevant information in the same website (same domain) or it can link to different relevant websites where the information is stored.

To get a sense of the difference between website and portal, consider two examples. The online information for the UK is organized under ONE government portal (<http://gov.uk>). The US has both a portal—actually, many portals, see <http://www.usaspending.gov/>, <http://www.data.gov/>, <http://www.usa.gov/>; and specific websites, which is where the official information is stored (<https://www.whitehouse.gov/omb/budget/Overview>). The UK websites are not better because they are organized under the portal. And the US website of the Office of Management and Budget meets most criteria we've established independently of the Portal (which is actually elsewhere). We are interested in the best forms of disclosure, which do not necessarily include a portal, though if a portal exists and all other conditions are met, this would ideally be good practice.

We have grouped the necessary criteria for assessing online fiscal disclosure along four dimensions: Scope, Accessibility, Reliability and Feedback.

**Scope** refers to the breadth and completeness of the fiscal information made available online. All information produced by the government should be made available, and this includes specific types of information. Testing the *scope of proactive online disclosure* allows us to assess whether all relevant FMIS information and primary sources are linked and referred, whether there are any sectors or areas of disclosure facing problems, whether the information disclosed online adheres to the official classification and disaggregation levels established in laws and fiscal codes, and whether specific information that is especially relevant for monitoring public policy and services is also disclosed online (this particular area can be adjusted on the basis of country, sector or government-level specific interest by the IBP and our partners). *Scope* is especially relevant for fiscal information.

**Accessibility** groups the diverse conditions that make it possible to identify, understand and use relevant fiscal information and datasets. Testing how accessible websites are requires identifying specific information conditions (what guidance, source and reference information exists to make it easy to interpret, use and replicate government information), specific data requirements (making datasets downloadable, machine readable, easily searchable and understandable), and specific website requirements (including diverse information profiles, interactive features to facilitate the use of the website by users with diverse and distinct levels of specialization, and search, query tools).

**Reliability** refers to the conditions of the available information, online data and websites that make it possible to *trust* the information proactively disclosed, that document and identify sources, track changes in the data, validate data queries and make it possible to understand changes made to the information and data disclosed over time.

**Feedback**, finally, refers to the set of conditions in the online disclosure portal or website that a) make it possible for citizens to request assistance for understanding or interpreting specific information or data and b) make it possible for government authorities to consult users for adjusting online information design and interactive tools, in order to make the most effective use possible of proactive disclosure instruments and practices.

## 2.2. Assessment Indicators

The proposed indicators for each of these dimensions are detailed below. They are 17 in total, plus a standalone question to identify whether a country has a portal, in addition to the official budget website(s).

These indicators have either been adapted from existing assessment criteria or developed to complement them, using the information from the in depth interviews with experts, from whom we requested key challenges for accessing online fiscal data, and most relevant assessment criteria. We have opted for a limited set of indicators that can be directly tested, to adhere to the IBP terms of reference. Where the indicator lists a set of options, they will be used for scoring and gradation once indicators are populated.

### Portal

#### **P1. Does the government publish its budget and revenue information in a specific and dedicated portal?**

### Scope

#### **S1. Completeness:**

- Are all eight budget documents as identified by the OBS published and disclosed online?
- Does the website or portal publish guidelines and manuals to explain and understand the budget cycle and the budget documents?
- Does the website or portal publish different types of fiscal information, including both budget and revenue information?

#### **S2. Comprehensive revenue information**

- Does the revenue information disclosed by the government website or portal include the basis of economic growth and revenue estimates?
- Does the revenue information disclosed by the government include detailed revenue sources, by type of income?
- Does the revenue information disclosed by the government include historic and year to date debt information, disaggregated by type?
- Does the revenue information disclosed by the government include detailed aid and cooperation funds?
- Does the revenue information disclosed by the government include disaggregated estimates of fiscal expenditures, including a methodology and basis for their estimation?

#### **S3. Comprehensive budget information**

- Does the budget information disclosed by the government website or portal include in-year adjustments to the approved budget?
- Does the budget information disclosed by the government website or portal include specific 'check-book' level information for its programmatic activities?
- Does the budget information disclosed by the government website or portal include specific and disaggregated infrastructure project information?
- Does the budget information disclosed by the government website or portal include specific and disaggregated information on program personnel salaries and benefits?
- Does the budget information disclosed by the government website or portal include detailed procurement information?
- Does the budget information disclosed by the government website or portal policy results information/

## Accessibility

**A1. All proactively disclosed information and data can be accessed for free, with no registration conditions**

**A2. The portal or website includes specific guidance information, including:**

- A detailed **site map** that considers all available pages, documents, datasets and links;
- An easily accessible **glossary**;
- An easily accessible **document explaining the government classification system** and levels of disaggregation;
- Easily accessible guidance **documents explaining what each document and dataset contain**;
- Easily accessible guidance documents explaining **what information is not included for legal or administrative reasons and how to request it**;
- Detailed **licensing information** for each document and dataset.

**A3. The portal or website has query, search and representation tools for exploring information and data.**

**A4. The portal or website includes APIs that facilitate bulk and granular access to datasets.**

**A5. The portal or website has standardized domains, links, information and data nomenclature.**

**A6. Datasets are presented according to standardized formats, tagged and described.**

**A7. Datasets are downloadable, machine readable and disclosed in non-proprietary formats.**

## Reliability

**R1. The information and datasets disclosed by the government website or portal:**

Are published promptly after being created by the respective government agency

Identify their source

Have a date of publication or last change

**R2. The website includes a document detailing the sources, publishing schedule and timelines for all information and datasets proactively disclosed.**

**R3. All datasets produced by static and dynamic queries, data representation graphs and tables produced by website tools include source information and a date stamp**

**R4. The government website or portal registers changes to its datasets and documents, and:**

it produces a log of all changes that can be easily accessed by users;

it manages a listserv users can register in to be notified of changes made to datasets;

**R5. Historical information and previous versions of existing datasets and previous websites are stored and accessible for at least five years**

## Feedback

**F1. The government website or portal has feedback mechanisms that allow users to request guidance and assistance, including:**

- Static feedback forms, where you can leave a question and contact information
- Interactive feedback forms, including telephone and chat and
- General contact information (email)
- Specific contact information, including contact name and specific email of responsible offices
- A log-system for following up on specific guidance and assistance requests

**F2. The website has an easily available document or set of documents reporting website user statistics and past feedback and responses.**

As indicated above, it is important to be mindful of what the assessment dimensions measure. While ‘portals’ are now common, a ‘portal’ in and of itself does not ensure accessibility and reliability conditions are met. Best disclosure practices can occur (and often do occur) in country websites and webpages, independently of whether they are a ‘portal’ or not. In testing whether there is a portal, we are interested in identifying how portals facilitate proactive disclosure generally. We test it with a stand-alone indicator, which identifies whether the country under scrutiny has a portal. The rest of the criteria explore how sophisticated and ‘good’ a website or portal is—independently of whether the website is designed as a ‘portal’ or not. These criteria are grouped in the four main dimension of our assessment: scope, accessibility, reliability and feedback.

The four dimensions assess *conditions*. Scope refers mostly to information conditions, accessibility and reliability refer to data and website conditions, with some specific document and information requirements; and feedback refers to website conditions allowing citizen engagement of the authorities responsible for online disclosure.

The proposed assessment framework and criteria detail specific data and website conditions, as do the open government data principles, without losing sight of the relevance of *specific* fiscal information for promoting accountability; of *narrative* guidance, and source information for ensuring accessibility and reliability; and of feedback information mechanisms to facilitate one of the last open data criteria developed, emphasized as relevant by all international financial institutions and agencies: data design based on public input.

In other words, it emphasizes the dimensions most relevant for fiscal and budgetary openness, not just data openness. And it allows direct testing through website verification.

All Scope and Feedback indicators can also be contrasted after direct assessment using the World Bank FMIS assessment database, and some of the Accessibility and Reliability indicators can be tested using the Open Data Index, which has revenue and budget data components for some countries.

### 3. Methodological considerations

We propose the four dimensions and 17 indicators—discounting the portal stand-alone question—be assessed using a checklist methodology on an indicator-specific scale. Each indicator will be tested as a question with specific answers from a drop-down menu in the attached spreadsheet, and the answer will be selected after exploring the dedicated government portal, website or collection of websites.

Each question will be assigned a number of points ranging from 0 where the condition is not met through as many as 6 where all components of the indicator are met (only indicator A2 has six conditions, most indicators have between two and four).

To populate the indicators, the research team will carry out two independent assessments. Two researchers will fill the checklist for each country, and score the indicators, separately, then we will compare and contrast results to assess differences, and where differences exist, record and discuss them.

The populated indicators can then be validated by 1) the country researcher completing the Open Budget Survey, and 2) the government authorities responding, where appropriate.

After all conditions for each indicator are populated with a value ranging from 0 to 6, we will aggregate for a value of each indicator on a 0-100 scale, and average all indicators for scoring each dimension in the same scale. This scoring (already coded in the excel spreadsheet researchers will use as a template) is optional, and will vary after the assessment is completed. The data can also be presented as a dashboard, with either a traffic light visual presentation or as an adjusted radar or disk area graphic.

#### 4. What the assessment does not do

Because we have sought to produce an assessment framework, criteria and indicators that can be applied immediately and can be directly tested, it is worth noting there are some areas of interest that cannot be thoroughly addressed.

The assessment does not directly address the *quality* of fiscal information proactively disclosed online. We will assess whether a basic level of disaggregation produces useful revenue and budget information, but we cannot specifically address the quality of this information. The same goes for query and interactive website tools and specific information types (procurement, 'results' and check-book level information). We assess whether they exist, but the quality of the information and representation graphs produced, where it exists, can vary widely. That assessment is beyond the scope of this framework as it is framed now. Two adjustments need to be made to change this: 1) define criteria for testing the quality, not just the existence of specific information and query tools; and 2) ensure interpretation across countries is maintained. This is difficult but not impossible, in upcoming years.

We do not consider whether the website or portal is designed for *diverse publics*, which is a desirable characteristic, according to the experts we interviewed for developing this methodology. Discerning between different types of user allows authorities to disclose both general, easily accessible information and detailed, highly specific and technically sophisticated data. We have included indicators that can indirectly assess that discernment by pondering whether diverse information with different levels of disaggregation is disclosed. But to test whether website design is planned for diverse publics we would need to ask them directly. This can be done, but it is not a direct test.

Finally, we only test whether feedback mechanisms exist, not whether they are used, or whether they are meaningful. Testing existing feedback loops requires interaction with governments and users (participation taken into consideration in design; effective and timely responses to specific inquiries). This assessment is also beyond the scope of this framework and making changes to assess whether there are loops in place and of what quality cannot easily be achieved without broader government consultation or survey data.

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