

Digital Budgets: How are Governments Disclosing Fiscal Information Online?

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Executive Summary

Governments are increasingly using the digital space as the main avenue for disseminating fiscal information. The Open Budget Survey 2015 found that all 102 countries surveyed maintained websites that contain at least some budget information, and 96 percent of publicly available budget documents were found to be published online. Despite the ubiquity of using websites and portals to disseminate budget information, there have been relatively few attempts to systematically examine government practices in disclosing budget information online.

Developing a better understanding of how (and how well) governments are using websites and other online tools to make budget information available to the public is therefore both crucial and timely. This paper aims to examine online disclosure practices by assessing the websites and portals of 80 countries that were included in the Open Budget Survey 2015.

Methodology

Much of the existing literature that looks at government online disclosure practices refers to two movements: 1) the World Bank's efforts to open up and modernize Fiscal Management Information Systems (FMIS); and 2) standards and principles developed by the global Open Data movement. Our methodology draws on thinking from both, adapting what is most relevant to fiscal transparency and how fiscal information is used by citizens and communities.

We also conducted in depth interviews with 14 experts from civil society, government, and international financial institutions to determine what is most important when disclosing budget information online.

Drawing on the literature and the interviews, we devised four dimensions to measure the effectiveness of online disclosure:

- **Scope** concerns the breadth of the information disclosed online by examining the overall completeness of the budget information and the comprehensiveness of the information.
- **Accessibility** concerns the extent to which governments facilitate public access to the information and whether it is comprehensible and easy to use. This includes an examination of the tools available to interrogate the data, whether data is machine readable, and whether guidance on how to use data is provided.
- **Reliability** concerns the extent to which online disclosure practices are in place to facilitate trust and confidence in the information and data disclosed by governments. This includes examining whether the date of publication is given, whether data sources are identified, and whether changes to the data are logged and retrievable.
- **Feedback** concerns the extent to which mechanisms are in place that allow users to respond to the information presented. This includes whether users can request assistance and guidance, as well as whether user statistics are presented.

To measure these four dimensions we developed a questionnaire consisting of 17 indicators. We used these indicators to assess the websites and portals of 80 countries, scoring each of the dimensions on a scale of 0 to 100.

We also distinguished between two types of online platforms. The first, which we refer to as a website, is commonly designed to serve the disclosure needs of a ministry or government agency. The second, which we refer to as a portal, is designed with external users in mind and

incorporates materials, tools, and language to assist different audiences to explore the information and data.

Findings

Of the 80 countries surveyed, only France, the Kyrgyz Republic, and Peru were found to perform well (scoring 60 or above) across all four dimensions. All three of these countries disseminate budget information through both finance ministry websites as well as portals linked to their FMIS database.

Overall, countries tended to perform better on the scope dimension than on accessibility and reliability. Almost all countries performed poorly on feedback. Accessibility and reliability scores can be usefully aggregated to compare and contrast with scope scores. Doing so we can identify four distinct groups of countries:

1. A small group of top performing countries that score very high in scope (over 80) and relatively high in accessibility and reliability (over 60).
2. Countries that score around or above 80 in scope but less or much less than 60 on accessibility and reliability.
3. The largest group is made up of countries with middling scores (between 30 and 60) in scope, accessibility, and reliability.
4. A group of very opaque countries (scores of under 30 across dimensions) that fail to publish even basic budgetary information.

Interestingly, many of the countries performing well on one or more dimensions are low and middle-income countries. This suggests that not only advanced economies are capable of building robust and user-friendly online budget disclosure platforms.

Recommendations

A number of key recommendations emerge from the findings:

- All countries should be encouraged to set up dedicated portals for the dissemination of budget information.
- Countries with high scores on scope of information but lower scores on accessibility and reliability should focus on accessibility first. This includes providing tools and resources to help users access and interpret raw data.
- Countries with high scope and accessibility scores should focus on improving reliability. This includes developing mechanisms for logging changes and identifying the sources of published data.
- Countries with budget transparency portals that do not comply with open data principles and practices should open up bulk access to their budget databases. While online tools can be useful for lay users, most experts want downloadable datasets to conduct monitoring.
- Countries that already have good open data and budget portals should link and cross-reference information between sites. This will facilitate access to guidance for data users and access to data for basic users.
- All countries should develop better feedback and reporting mechanisms.

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1 Introduction

Budget transparency can be measured by looking at the extent to which governments make fiscal information publicly available. In some cases this is done through the actual printing and distribution of budget documents that are made available at certain locations, such as ministries of finance, government printing offices, or public information centers, or upon request by interested citizens and stakeholders. In recent years, however, posting documents on websites created and maintained by government institutions has become the main channel for publishing fiscal information. In fact, all 102 countries covered by the Open Budget Survey (OBS) 2015 maintain functioning websites where at least some fiscal information was made publicly available. Increasingly, governments are improving online fiscal disclosure practices by setting up comprehensive and user-friendly portals where anybody can search and download regularly updated budget information in different formats.

To better understand these evolving practices, and identify interesting examples that could be considered as standard-setting, the International Budget Partnership commissioned *Fundar, Center of Analysis and Research*, to formulate and test a set of criteria for assessing and comparing how governments from countries participating in the OBS make fiscal information available online. Fundar reviewed literature and studies of online disclosure practices, convened a group of experts and practitioners working on budget transparency and open data, and developed a number of indicators to assess how government disclose budget information online.¹

The resulting methodology stresses four relevant dimensions for exploring online disclosure of budget information. These are:

- 1) The **scope**, breadth, and comprehensiveness of the expenditure and revenue information available.

¹ A list of interviewees and references can be found in Annex 1 and 2.

- 2) The **accessibility** of budget information, if it is accompanied by reference materials, and whether the large datasets produced by national budget systems can be easily accessed and explored.
- 3) The mechanisms and measures governments take to ensure the information is **reliable**. This includes referencing sources as well as registering and communicating changes to the datasets disclosed.
- 4) Whether governments facilitate and report back on citizen voice and participation through online **feedback** systems.

Scope, accessibility, reliability and feedback are all key to gauging how well governments disclose budget information online. The proposed set of indicators captures the most salient features and criteria of recent studies, and adapts them to allow for direct testing of these conditions. We produced indicators, research, and validation methods that rely on direct assessment of whether the conditions tested exist. The indicators are tested and add up to a score ranging from 0 to 100 for each dimension. As each indicator is tested independently we can identify good disclosure practices in each of the four dimensions studied.

The methods developed aim at: 1) assessing the quality and content of the different types of websites and portals used by governments to disclose budget information; 2) identifying elements of good practice that support specific recommendations for governments to improve fiscal transparency and disclosure practices; and 3) developing an illustrative comparison between countries with similar systems and practices.

Using the proposed questionnaire, with 17 indicators in four dimensions, we carried out research of the online disclosure practices in 80 countries participating in the OBS.²

The assessment has identified a number of countries with overall good practices. We have also found that the publication of complete and comprehensive information is much more common than the use of accessibility and reliability measures. This means countries are more likely to

² Not all countries were included due to language limitations in the core research team, though efforts were made to procure the support of local researchers in all 102 countries.

have strong scores in the scope dimension, and underlying good practices relating to the information itself, than they are to make efforts to ensure the information disclosed is accessible and reliable in the long term (through detailed source and reference information). Even among the best performers, this gap is evident.

Table 1.1. Average Score by Dimension

	Scope	Accessibility	Reliability	Feedback
Top performing countries	84.48	73.64	60.31	52.19
All other countries	52.93	34.85	15.16	22.03

Reliability is consistently evaluated worse than accessibility in all countries, though the gap is less pronounced in top performing countries. Feedback is the second worst dimension in all countries, and the worst amongst top performing countries, even though we set a very low bar for the indicators—whether a broad range of feedback mechanisms exist, and whether countries report back on website users. This is preoccupying and may explain why governments have not made accessibility and reliability a priority: they have just not asked citizens how they use the information.

The countries under study can be divided in four groups: the top performers, who have sound disclosure practices in all dimensions; top-performers with gaps, usually countries disclosing broad and comprehensive information and a strong score in scope of information, who have important holes in one or more of the additional dimensions; mid-range performers, who lack important conditions in both scope of information and the rest of the dimensions; and laggards, who have very low scores and no good practices across all dimensions. More on this in sections three and four, below.

The document presents the basis and findings of the assessment in the four following sections. Section two presents the methodology.³ Section three explores whether there is a difference between the use of portals and websites for disclosure, and proposes a typology for the 80 countries studied. Section four presents country performance in all dimensions under study, and a brief analysis of the best practices found. Section five formulates recommendations for

³ A full description of indicators, sources and methods is available upon request.

countries in various groups and score range, and additional recommendations for communities of practice promoting transparency and openness in government data.

The assessment is intended to produce a direct exploration of online disclosure practices across a large number of countries and yield useful information on overall trends and good practices. Because the instrument was designed for direct testing, it does not look into government processes or internal discussions of the challenges to disclosing fiscal information online. It does not address why some practices are less common than others, some dimensions are less prioritized than others, and what causes laggard countries to be so far behind.

Despite its limitations, however, the assessment does produce useful lessons: low and middle-income countries have successfully opened up their budget information reliably, making information and datasets more accessible. It can be done, and it apparently can be done without large investments in technology.

We hope this study shines light on what more transparent countries have already done to open up fiscal information. And we hope it generates an interest, and derivative analysis, further enabling transparency in mid-range and low performing countries. Especially where efforts to open up fiscal data with the support of the international Transparency and Open Data communities are already underway.

2 Methodology

We worked along two separate tracks to develop the methodology, the indicators, and the research and validation mechanisms for the study. First, we reviewed recent academic literature and assessments looking at online fiscal disclosure and transparency. Second, we interviewed a group of experts and practitioners involved in driving online fiscal transparency in countries all over the world. Interviewees included government officials tasked with website design and outreach, experts supporting online disclosure at the international level, and expert users of online disclosure platforms in a broad range of countries (see Annex 1).

As a result, we became aware of the relevance of incorporating specific mechanisms for ensuring the information is accessible, reliable, varied, and comprehensive. We also learned the

importance of incorporating user feedback into web design. While this is difficult to gauge without asking the authorities in charge of design, we crafted two indicators to address this issue directly.

Before explaining how we arrived at each dimension, it is important to underscore the relevance of two movements for setting up the terms of reference of fiscal information disclosure online.

- 1) Efforts to modernize and open up **Fiscal Management Information Systems (FMIS)** around the world, led by the World Bank.
- 2) The global **Open Data** movement that has developed and tested a set of standards and principles for online data and information disclosure.

Most of the literature examining the disclosure of budget information online refers back to these two dialogues.⁴ The methods developed by the research team owe much of their specificity when addressing what it takes to make information accessible and reliable to the communities of practice behind these dialogues.

Our assessment differs in that the criteria and indicators developed are specific to fiscal transparency. The FMIS discussions explore online transparency from the perspective of whether and how existing government information systems are used. However, we are more interested in the conditions of fiscal transparency than whether or not they link back to FMIS disclosure. They often do, but just as often do not.

Likewise, where the Open Data definitions and principles make reference to access and reliability, they explore these conditions in relation to a normative set of standards of what the term “open” means. In contrast, we have explored how access and reliability matter to fiscal transparency and why they should be assessed in the context of fiscal transparency proper, from the perspective of users.

⁴ See, for example, Dener and Min (2013); Craveiro et al. (2013); and Davis and Baxandall (2014). Full references are available in Annex 2.

So, while we often have similar criteria and standards, we have adopted those most relevant to fiscal transparency by exploring how they matter to citizens and communities accessing fiscal information. That is why we have only kept some indicators, and why we have framed them along these four dimensions, instead of the well-established and known criteria and standards of “open.”

2.1 Four Dimensions of Online Fiscal Transparency

We propose examining practices of the online disclosure of fiscal information by focusing on four dimensions: scope, accessibility, reliability, and feedback.

Scope refers to the breadth of the information disclosed online, whether it covers complete fiscal information, including revenue and expenditure, and the comprehensiveness of the information disclosed.

According to the experts we consulted on how fiscal information is disclosed online, revenue information is often missing or less comprehensive than expenditure information. We developed an indicator to test this assertion.

We also examined the specific types of information that are commonly disclosed online: the key budget documents produced by governments and auditing agencies, up to date and historic debt information, basis for the economic and revenue estimates, details on cooperation funds received, and information on the impact of tax expenditures. All these types of information are commonly used to monitor government commitments and fiscal performance and, whether or not it is published online, most countries produce this information. On the expenditure side, we explored whether governments disclose how they have adjusted expenditure during the budget year, information useful for direct monitoring of projects (checkbook level information on specific items bought, procurement bids awarded, information on infrastructure projects, and civil servants’ salaries), as well as information on the result of policies financed with the budget.

Most of the information we considered under scope refers to how useful the information disclosed by governments is for actually monitoring and engaging governments (at the level of

trends, priorities, and results) and specifically (through monitoring specific projects and agencies).

The scope of information disclosed online helps to determine how relevant it is to citizens, specialists, and communities using that information for a variety of purposes. We have sought to capture this with our indicators.

Accessibility refers to whether governments facilitate public access to the information disclosed, as well as whether they make it comprehensible, reachable, and easy to use. To test this measure we examined a number of practices:

- If guidance documents to facilitate understanding the budget information disclosed are provided.
- The availability of search and query tools to help users sift through and explore the information and data disclosed online.
- How information systems are used to facilitate access. This includes applications that make it easy to use the datasets online, standard link structures that make it easier to find specific data and datasets, descriptions that allow people to understand categories of information when datasets are disclosed, and whether datasets can be downloaded freely and in formats everyone can use.

While this is arguably the most technical set of criteria in the assessment, it is important to remember accessibility mechanisms are not just relevant for adhering to general principles, or an ideal of how information should be disclosed online, but actually make it easier for people accessing the information. These technical conditions facilitate access. They matter because they make it possible to use, reuse, explore, and interrogate the information and data provided.

Reliability refers to a related but different set of information and technological requirements that facilitate trust and confidence in the information and data disclosed by governments. This measure looks especially at sources, references, dates of creation and last change, and historical information of the same data. To assess this, we tested whether there the

information and data disclosed identify a source, date of creation, and last update, when it is made available for download and when specific information is produced by query tools (usually data placed in portal can be searched, tabled, and graphed through query tools, and it is considered best practice to include source and date information in the search results). We explored whether changes to the datasets and documents are identified, logged, and whether this information is made accessible to users. We also explored whether governments have a publishing schedule, and whether historical information and previous datasets are stored and made available for at least five years.

This dimension is relevant to one of the challenges most cited by the experts we consulted (see Annex 1 for the list of experts): how to ensure we know when governments change the information that is made available. While specific, formal documents in the budget cycle are not likely to change very often, actual expenditure and detailed budget information will change constantly. Furthermore, the datasets produced by governments will periodically be adjusted, and it is paramount the people that use these datasets know when changes are made. Sources, references, and ways of identifying changes each contribute to the reliability of the information. While many governments still do not use reliability measures, it is easy to see why they are so important when you see them in practice and when you get a sense of how often changes can occur or how quickly a budget table can be contextualized for readers when source, date of creation, and date of last adjustment accompany it.

Feedback refers to the efforts made by governments to give users of its online disclosure platforms a say. This includes varied means of contacting the responsible authorities, asking specific questions, and requesting guidance or additional information. As we ideally want to see a complete feedback loop, it is therefore also important that government authorities report back on this feedback with basic user statistics and other means, including documents detailing the feedback received. The potential users of online fiscal information can be very diverse. They include specialists, journalists, and citizens with specific concerns relating to specific expenditures and people from diverse backgrounds, levels of education, and technical expertise. The information users seek, and the ways in which they use it, will therefore be very

different. Awareness of this diversity, of what users want, and the challenges they face can facilitate accessibility and transparency in the long term. Feedback is key to developing better disclosure practices and tools over time.

While it would have been ideal to ask governments whether and how they seek and use feedback in the design and adjustment of their online disclosure platforms, we have purposely used a low standard that can be directly tested: are there diverse and specific feedback mechanisms in the website? And do governments report back on these, or at least provide general user statistics? Despite the bar being low, surprisingly few countries score well on the feedback measure (see section 3).

Box 1. Online Disclosure and the Open Budget Survey

The proposed methods for assessing online disclosure differ from the dimensions tested with the Open Budget Survey (OBS) in a variety of ways.

First, and most importantly, the OBS is a broader and more nuanced analysis that explores conditions of participation, accountability, and external control far beyond what we assess when looking at online disclosure practices.

Second, while both tools focus on budget information, in the dimension of **scope**, they do so by looking at different documents and sources. The OBS inquires specifically into the information disclosed through the eight key budget documents, which must be official and public in the budget process. This tool focuses on information disclosed online, whether or not it is in any of these documents. For example, when it is only disclosed in dashboards online it will not always be incorporated in the official documents.

Third, this online disclosure tool looks for very specific forms of information, useful for understanding and monitoring budgets, beyond the areas of focus of the OBS. Specifically, the tool looks for information on how certain fiscal data are estimated, granular, checkbook-level expenditure information, and other specific types of information, including detailed procurement, salary, and policy results information.

Fourth, the online disclosure tool explores many different variables that can only be tested by looking at online disclosure platforms not considered by the OBS in any way or form, including accessibility mechanisms, source and date information, as well as online query tools for interacting with datasets published online.

2.2 Information or Data? Websites or Portals?

Fiscal transparency relies heavily on strong qualitative, descriptive information that provides a narrative of how revenue and expenditure data are aggregated and disaggregated, classified, and grouped. Access to the actual data is also important for direct exploration, analyzing trends, and monitoring specific items.

The term ‘information’ refers to more than just data or datasets. Information includes 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. On the other hand, ‘data’ refers to electronically stored recordings or specific non-narrative information. Fiscal information uses data, and datasets broadly, to code, itemize, and group specific revenue and expenditure items. Most technical accessibility conditions refer to data, not information or documents. The term ‘online disclosure platform’, as we use it, refers to the website or portal through which the information and data are disclosed. While there are technical differences between a website and a portal, we have crafted the indicators to suit conditions in either one (see section 3, below). We have also identified, for each country, whether information is disclosed on a website, a portal, or both. But the indicators were populated by looking at the conditions of the website or platform independently of whether it is a portal or a website. An online disclosure platform could be a portal, a website, or set of related webpages that either host or link to fiscal information and datasets, with a standard link structure and specific technological conditions, including tags, tools for interfacing with applications, and search or query tools that allow users to explore the data and information.

Table 2.1 below looks at how each of the dimensions and indicators explore conditions in the platform, the information, and the data.

2.3 Indicators, Scoring, and Validation

To carry out the assessment, we developed a set of questions and criteria for each indicator and tested whether the conditions established by these criteria were met in each country. By looking at all relevant websites or portals in each country, we produced a score for each of the four dimensions.⁵ When conditions were met, researchers were asked to indicate the specific link where information was found, when conditions were partially met, we asked researchers to comment and explain.

After all 80 questionnaires were completed, we carried out a detailed revision of each questionnaire and references to ensure all answers were duly validated and ensure consistency in the interpretation of the questions across countries.

To score the indicators, and each dimension, we graded each indicator and its underlying criteria on a scale of 0 to 100. Where the condition tested had intermediate values we adjusted on a percentage basis, depending on the number of criteria to meet.

We aggregated all criteria to give an average score for each indicator, then all indicators to give an average score for each dimension. All indicators have the same weight when aggregating the score for each dimension.

⁵ Information on which websites and portals to consult was taken from Table 4 in the 2015 OBS country questionnaires, available at: <http://internationalbudget.org/opening-budgets/open-budget-initiative/open-budget-survey/country-info>. In some cases, we found additional online disclosure platforms. A full list of websites and portals used to test each country is available upon request.

Table 2.1. Dimensions and Indicators: What are we Measuring?

Dimension and Indicators	What is measured
Scope	
S1. Completeness (Are both revenue and expenditure disclosed online? Are all documents from budget process there?)	Conditions of <i>data</i> and <i>information</i> in the online disclosure platform (website or portal)
S2. How comprehensive is the <i>revenue</i> information?	
S3. How comprehensive is the <i>budget</i> (expenditure) information?	
Accessibility	
A1. Is registration required?	Conditions in platform
A2. Is there specific guidance information?	Conditions of <i>information</i> in platform; conditions in the platform
A3. Does portal have query, search / representation tools for exploring information and data?	Conditions in the platform
A4. Does the portal have tools that facilitate bulk and granular access to datasets?	
A5. Does the portal have standard domain names, links, information and data <i>nomenclature</i> ?	
A6. Datasets are presented according to standardized formats, tagged and described.	Conditions of <i>data</i> in platform
A7. Datasets are downloadable, machine readable and non-proprietary.	Conditions of <i>data</i> in platform
Reliability	
R1. Date of publication, source published with information and data?	Conditions of <i>data</i> and <i>information</i> in the platform
R2. Are there reference materials, including a list of sources, a publishing schedule and timelines?	Conditions of <i>information</i> in the platform; conditions in the platform
R3. Date of publication, source published with information and data produced by queries?	Conditions in the platform
R4. Are changes to datasets and documents identified?	Conditions of <i>information</i> in the online disclosure platform; conditions in the platform
R5. Historical versions of information, datasets and previous websites are stored and accessible	
Feedback	
F1. Does portal have feedback mechanisms that allow users to request guidance and assistance?	Conditions in the platform
F2. Does portal have an easily available document or set of documents reporting website user statistics and past feedback and responses?	Conditions of <i>information</i> in the platform; conditions in the platform

Note: This is a summary table. The complete indicator questions and the full list of criteria are available upon request.

2.4 A Typology of Disclosure: Do Portals Matter?

One of the first questions fielded by the research team when developing the methodology was whether it mattered that fiscal information was disclosed on a website or a portal and, if so,

how. Budget transparency portals appear to be used to disclose a broader range of information. Without further exploration, however, it was uncertain whether websites could be used as effectively.

There is no standard definition that distinguishes a portal from a website. Most communities of practice that explore transparency and disclosure practices do not differentiate between the two, simply considering portals as a type of website. However, two things become apparent when looking at online budget disclosure practices. First, many countries and agencies are making concerted efforts to create disclosure platforms with a focus on users and these efforts are usually referred to as portals. Second, there are differences between official websites specific to a ministry and broader, more detailed websites which incorporate user-oriented menus and tools.

With this in mind, we set out to explore whether there are considerable differences and understand what distinguishes the two types of disclosure platforms. This matters because many countries are moving towards developing portals despite having fully functioning websites. On the basis of our exploration, we can distinguish between two types of platforms.

The basic platform, which we refer to as a website, is designed to serve the disclosure needs of the ministry or government agency and does not incorporate language or tools to support external users. It is a web page or a collection of related pages that either hosts or links to fiscal information and datasets, with more or less developed technological conditions including a link structure, tags, and keywords in each page.

The second platform, which we refer to as a portal, is a specific kind of website designed to be a landing or “first access” platform where users link to a specific subset of webpages and related information. A portal usually includes clear reference materials for different types of users and is a single point of access to a broad range of information. 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.

Both websites and portals may include links to documents and datasets. They may also include search and query tools for exploring the information and data contained in the website or platform, and more advanced tools for facilitating access to the information and data on using automatic programs and protocols. The key difference between a good website and a portal is not whether there are tools or datasets, but whether they are designed to be an entry point with the user in mind (a portal), or designed to be a reference point with the disclosure needs of the government agency in mind (a website).

Consider the case of the United States, which has a very good website and a very good portal. The website for the President's Office of Budget Management (OBM) discloses information according to the legal formats needed by US rules and directives, but also includes excel spreadsheets of all tables. The website itself does not have query tools, but the information is otherwise exhaustive and there are sound accessibility mechanisms, with some source and reference information.

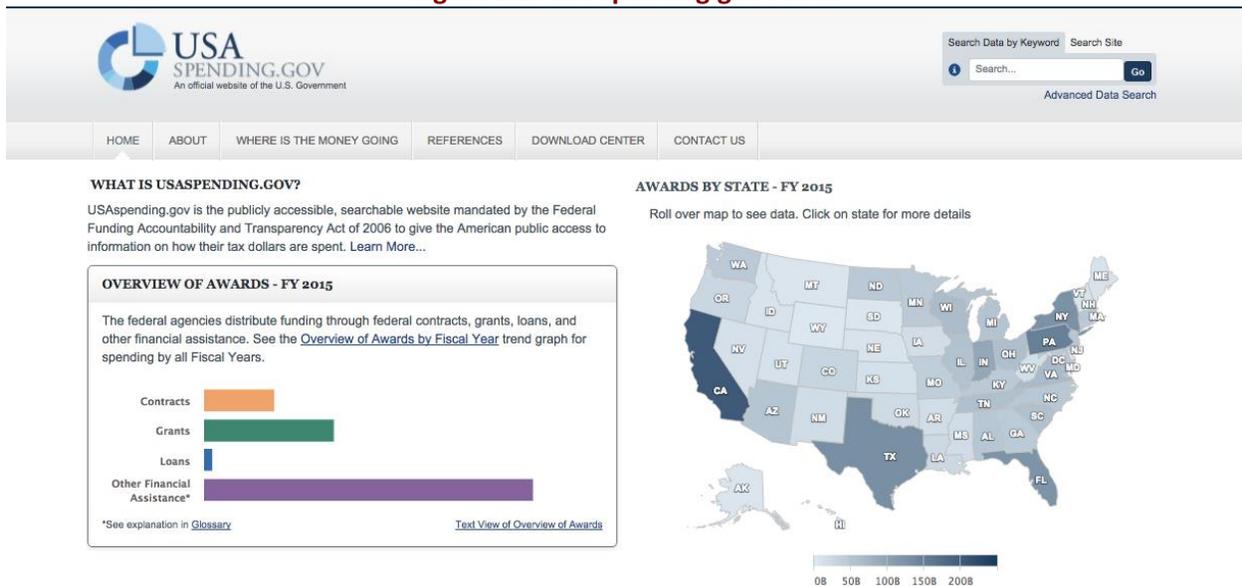
The portal, on the other hand, provides an entry point for accessing budget data. It features query tools to facilitate exploration and specific, detailed guidance and reference information. Users can quickly get to the information they need within the portal or to information outside it through external links.

The OMB website's menu clearly identifies it as a government website. It includes links to agency specific information and is organized around the functions of the agency (see Figure 2.1). The portal has a much broader and user-friendly menu (see Figure 2.2), directly referring information users outside government would find useful and provides useful information to guide users.

Figure 2.1. The Office of Management and Budget Website



Figure 2.2. The Spending.gov Portal



In some cases, websites also have some query tools, as for example in Brazil and Portugal. The Brazilian website allows users to quickly search, table, and graph budget information. Despite being a government agency website, it is clearly tailored for citizen use. While these query tools are clearly aimed at a diverse set of users, they are included in what is otherwise a website designed with the disclosure and publication needs of the finance ministry.

Figure 2.3. The Brazilian Federal Budget website

The indicators and testing criteria we developed can be used to assess either websites or portals. Most countries disclose information on websites. While many governments have some form of portal (usually open data), only a handful have a budget information portal or include fiscal and budget information in their open data portal. To include as many platforms as possible, we assessed whether conditions were met in the country by looking at both websites and portals.

We found that, in most cases, countries with portals scored better on the accessibility and reliability measures. We also found that portals and websites can be complimentary, especially when hosting large groups of datasets (which are usually hosted in portals, whether these are specifically devoted to fiscal information or more general open data portals). Of the 80 countries tested, 23 have portals for disclosing fiscal information. We found two more cases where there was a portal (Colombia and the Dominican Republic), but it was very incomplete and most of the fiscal information was hosted on the finance ministry websites. We listed these

countries as “no portal” because the portal was not used as the reference point for online fiscal disclosure.

Table 2.2 below distinguishes average scores by dimension in countries with portals and countries without portals.

Table 2.2. Average Scores in Countries with a Portal and Without a Portal

	Scope	Accessibility	Reliability	Feedback
Countries with portal	82.85	64.37	45.87	38.91
Countries without portal	49.18	33.67	15.45	23.18

It is clear that countries using portals have better disclosure practices across all four dimensions. Among the top 16 performers, 13 use a portal. Only Colombia, the Dominican Republic, and Indonesia disclose their fiscal information on a regular website. However, six countries that use a portal do not perform as well, especially in accessibility and reliability (Honduras, Hungary, Mexico, Norway, Spain and Timor Leste). Section 4 of this paper explores these gaps.

Table 2.3 groups countries according to how they disclose information and data. Countries that use portals also disclose more information and data, in ways that are more accessible and reliable.

Table 2.3. A Typology of Disclosure?

	Portals only	A combination of portal & websites	Websites only
Discloses broad range of information and data, accessibly and reliably	France, Kyrgyz Republic, Peru, El Salvador, Argentina, United Kingdom, New Zealand, Sweden	Dominican Republic, United States	
Discloses broad range of information and data, but with limited accessibility and reliability features	Brazil, Guatemala, India, Indonesia, Germany, Honduras, Hungary, Italy, Mexico, Timor Leste, Norway, South Korea, Uganda.	Chile, Colombia	Ecuador, Afghanistan, Mali, Egypt, Morocco, Tanzania, Zimbabwe, Georgia, Kazakhstan, Portugal, Russia
Discloses limited information and data, with limited accessibility and reliability features		Spain	Tunisia, Ukraine, Bolivia, Kenya, Malaysia, Tajikistan, Algeria, Senegal, Zambia, Namibia, Iraq, Bosnia Herzegovina, Lebanon, Liberia, Chad, Macedonia, Ghana, Democratic Republic of Congo, Papua New Guinea, Rwanda, Sri Lanka, Nicaragua, Nigeria, Sierra Leone, Angola, Pakistan, Czech Republic, Mozambique, Nepal, South Africa
Very limited disclosure practices (very limited information, no data, no accessibility and reliability features)			Trinidad and Tobago, Burkina Faso, Bangladesh, Botswana, Malawi, Niger, Venezuela, Sudan, Cameroon, Fiji, Equatorial Guinea, Sao Tome

Note: By portal we mean a type of website meant to be an access point, and not ministry based, with clear and unambiguous user-friendly features, including the menu structure, guidance materials, quick reference information in the layout and links to more detailed guidance.

3 Findings

Using the criteria outlined above to analyze the characteristics and content of budget websites and portals, results show that very few countries score well across the various dimensions. The exception is France, which performs very well across all dimensions. Table 3.1 presents country scores across each of the four dimensions. Most countries do not achieve minimum standards (scoring above 40) on any of the dimensions. Interestingly, many of the countries performing well are low and middle-income countries.

Table 3.1. Country Scores Across the Four Dimensions

Country	Scope	Accessibility	Reliability	Feedback
1. France	91.67	90.43	100	75
2. Kyrgyz Republic	93.33	64.29	60	65
3. Dominican Republic	86.11	80.86	60	55
4. Colombia	76.67	64.29	50	90

Country	Scope	Accessibility	Reliability	Feedback
5. Brazil	94.44	85.71	40	60
6. United States	86.11	85.71	60	45
7. Peru	88.33	61.90	60	65
8. Guatemala	91.11	73.71	50	55
9. El Salvador	82.22	83.33	70	30
10. Argentina	72.22	66.57	75	45
11. United Kingdom	85.71	85.71	70	20
12. Sweden	91.67	61.90	60	40
13. New Zealand	91.67	71.43	60	30
14. India	80.56	64.29	50	55
15. Indonesia	53.33	76.19	60	55
16. Germany	91.67	61.90	40	50
17. Costa Rica	58.33	76.19	50	45
18. Portugal	71.67	59.51	70	20
19. Chile	87.78	83.29	20	30
20. Ecuador	79.17	28.57	30	80
21. Mexico	91.11	73.71	30	20
22. Czech Republic	58.33	54.76	60	40
23. Georgia	65.56	52.37	30	65
24. Italy	85.56	76.14	20	30
25. Uganda	67.22	30.94	50	55
26. Kazakhstan	61.67	52.37	30	55
27. Russia	87.78	57.14	40	10
28. South Korea	75.00	59.51	30	20
29. Tunisia	36.11	59.51	30	55
30. Timor Leste	80.00	50.00	30	20
31. Ukraine	53.89	40.47	20	65
32. Norway	85.56	50.00	30	10
33. Spain	57.78	52.37	40	20
34. Afghanistan	70.00	42.86	10	45
35. Bolivia	42.22	50.00	30	45
36. Kenya	55.56	54.76	40	10
37. Malaysia	55.00	61.90	30	10
38. Mali	80.56	30.94	10	30
39. Honduras	76.67	16.66	0	55
40. South Africa	62.22	52.37	10	10
41. Tajikistan	38.33	52.37	10	30
42. Algeria	32.22	45.23	20	30
43. Senegal	57.78	35.71	0	30
44. Egypt	60	23.80	0	35

Country	Scope	Accessibility	Reliability	Feedback
45. Zambia	46.67	38.09	20	10
46. Namibia	55.00	19.04	30	10
47. Nepal	56.11	45.23	0	10
48. Irak	40.556	38.09	10	20
49. Bosnia Herzegovina	56.11	21.43	10	20
50. Morocco	66.11	30.94	0	10
51. Nicaragua	61.67	23.80	0	20
52. Hungary	63.33	30.94	10	0
53. Lebanon	44.44	38.09	0	20
54. Liberia	55.56	16.66	10	20
55. Chad	43.33	28.57	20	10
56. Macedonia	53.33	23.80	10	10
57. Ghana	47.22	28.57	10	10
58. Mozambique	68.33	16.66	0	10
59. DR Congo	53.33	21.43	20	0
60. Papua New Guinea	46.67	38.09	0	10
61. Tanzania	67.78	16.66	0	10
62. Rwanda	52.78	30.94	0	10
63. Sri Lanka	49.44	23.80	10	10
64. Sao Tome	56.11	16.66	10	10
65. Nigeria	58.89	16.66	0	10
66. Sierra Leone	50.00	23.80	0	10
67. Zimbabwe	56.11	16.66	0	10
68. Angola	40.56	14.29	10	10
69. Pakistan	48.89	14.29	0	10
70. Botswana	20.55	28.57	0	20
71. Trinidad and Tobago	41.67	7.14	0	20
72. Burkina Fasso	44.44	14.29	0	10
73. Bangladesh	41.67	16.66	0	10
74. Malawi	30.00	16.66	10	10
75. Niger	5.56	28.57	10	20
76. Venezuela	20.56	23.80	0	0
77. Sudan	0.00	14.29	0	30
78. Cameroon	0.00	9.51	0	30
79. Fiji	11.67	14.29	0	10
80. Equatorial Guinea	0.00	0.00	0	0

Most countries do much better on the scope dimension than on the accessibility and reliability dimensions, and most perform very poorly on the feedback dimension.

There is also an issue of consistency. Only France, the Kyrgyz Republic, and Peru perform well (scoring 60 or above) across all four dimensions. Whereas other top performing countries have important gaps in one or two dimensions, usually reliability and feedback. Almost half of all top performers (Brazil, the U.S., El Salvador, Argentina, the UK, and New Zealand) score under 50 on at least one dimension, despite scoring high, or very high, on others.

France scores consistently higher across all four dimensions than all other countries, and also scores the maximum of 100 points for reliability. Most countries score far less on reliability, Argentina's score of 75 comes a distant second, and the average reliability score among top performing countries is just 59.7. Why does France score so highly on reliability? The country has two portals: a budget portal and an open data portal. All relevant fiscal datasets (269 as of September 2015) are hosted on these platforms. The second portal, specifically, has formidable measures to ensure information and data can be quickly situated and trusted. The datasets identify the formal source of the information, the authority that created the database, the date when the database was created, and when it was last updated. Users can register to receive notifications of changes on a list server which lists all changes made by the relevant authority to the database (i.e. it has a public log of all changes and updates), and comment on the data in an online forum linked directly below the dataset.

Most other countries fare far worse on reliability, as they either do not identify sources, date entries, log changes, or all of the above, and only marginally better in accessibility, which has an average score of 73.6 among top performing countries and 34.85 amongst the rest.

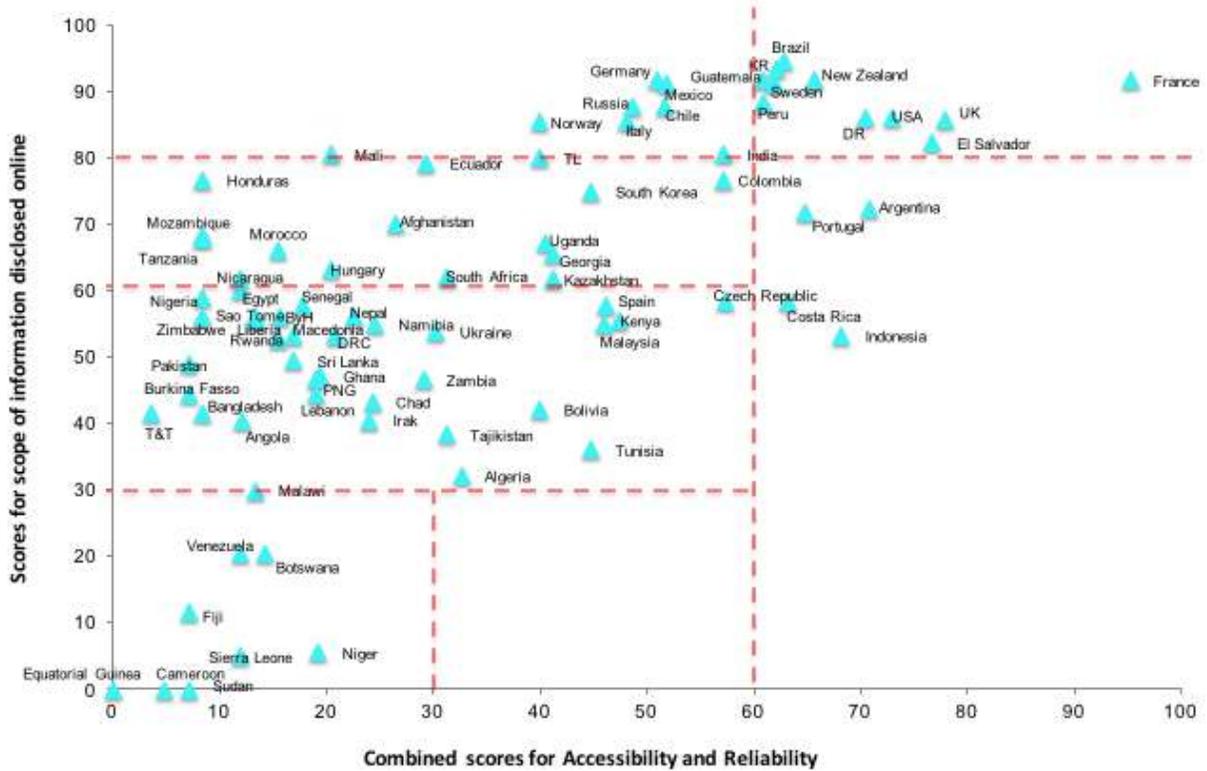
If we aggregate accessibility and reliability scores, and compare and contrast these with scores for scope of information (see the scatterplot in Figure 1), we can first of all visually confirm the finding that countries do much better on scope than they do on accessibility and reliability, as data points are clustered in the upper-left quadrant of the graph. The scatterplot also helps us identify four distinct groups of countries.

The first is a tight group of countries that score very high in scope (over 80) and relatively high in accessibility and reliability (over 60). This is the group of top performing countries, which is completed by Colombia, Argentina, India, Indonesia, and Germany. Each of these score lower

on one of the two dimensions and higher on another (with the exception of India and Colombia, who score marginally lower in both but make up for it in the other dimension).

A second group of countries score around or above 80 in scope but less or much less than 60 on accessibility and reliability. These countries have consolidated disclosure practices for information and data but have not yet made moves to ensure the information is accessible or reliable. While the information they disclose is exhaustive, it is often not published with guidance, not easily accessed for processing (through datasets and information tools), and/or does not reliably identify sources, changes, or publication dates.

Figure 3.1. Comparison of scope of information vs. accessibility and reliability mechanisms



A third group, the largest, is made up of countries with middling scores in both dimensions (between 30 and 60). These countries publish some budget information, usually the PDFs of formal documents. While they have taken small steps to make it accessible, they have failed to incorporate many changes to broaden the scope of the information nor have they improved access and sources (reliability).

A fourth and final group is made up of very opaque countries (scores of under 30 in both dimensions). These countries fail to publish basic budgetary information.

Costa Rica and Indonesia are outliers in that they perform better in accessibility and reliability, while their scope score is marginally lower than the average. This is because, despite gaps in specific information types, they have good guidance materials and basic technological conditions for enabling access to datasets. In Indonesia, particularly, the way fiscal datasets are linked and presented in the country's open data portal makes it easy to quickly access and situate fiscal information.

3.1 High Performing Middle-Income Countries.

One of the most interesting findings of the assessment is the fact that middle-income countries perform so well. Six of the ten countries with high scores across the scope, accessibility, and reliability dimensions are middle-income countries (Brazil, the Dominican Republic, El Salvador, Guatemala, the Kyrgyz Republic, and Peru).

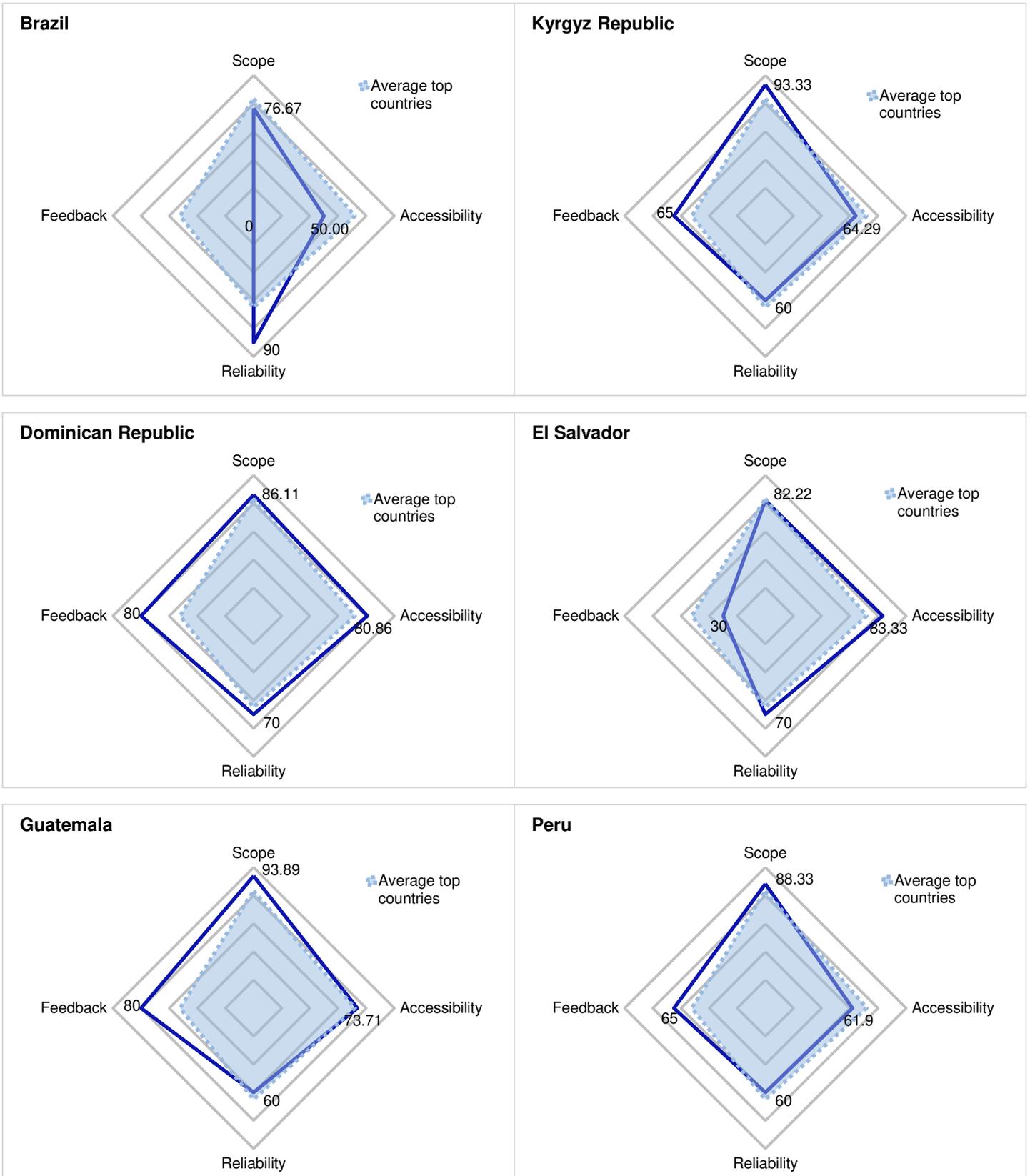
Most of these countries have recently worked on two fronts, driving budget transparency efforts and making large datasets available through portals that are linked to their FMIS system. The four Spanish-speaking Latin American countries in the list, along with Brazil and the Kyrgyz Republic, have followed the World Bank's lead for disclosing FMIS information. This could explain why they have very similar practices, especially regarding accountability and reliability.

Figure 3.2 explores how these countries fare across all dimensions compared to the average of the top countries.

Linking portals with FMIS has made it likelier that datasets, when they are available, will have representation and query tools (the data can be explored by choosing specific search criteria or specific items to graph). Five of these six countries get top marks in representation tools. It has also made it more likely their datasets identify a source, and have date stamps. Again, five of these six countries get top marks on the source and date criteria.

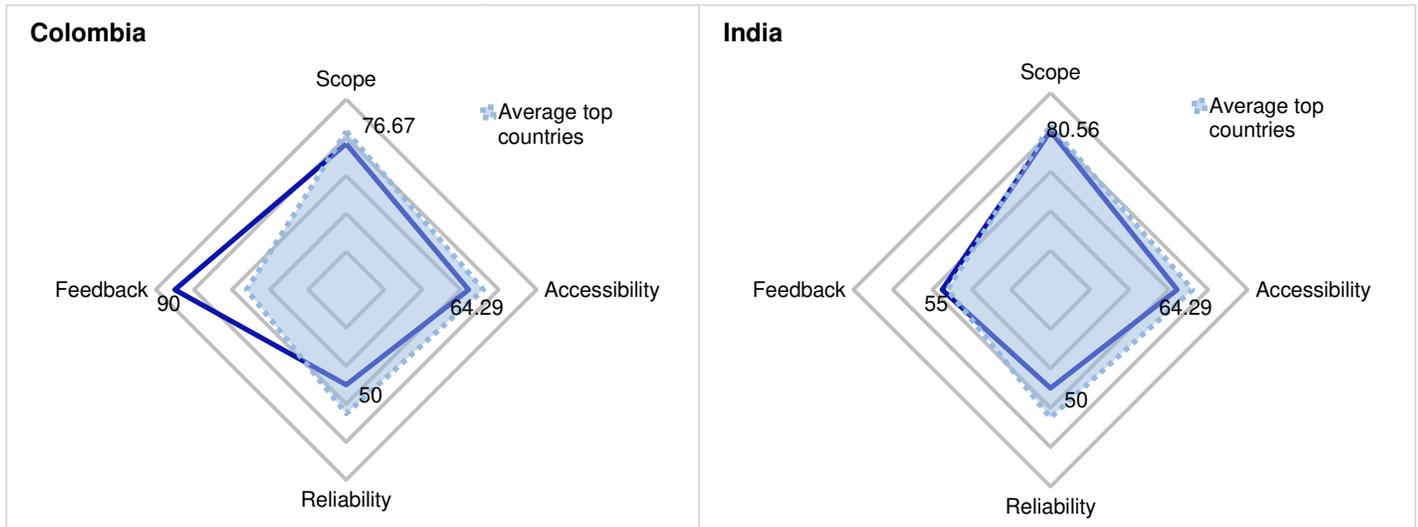
Four more middle-income countries are in the top sixteen but not among the group at the top of the scope versus accessibility and reliability comparison. These are Argentina, Colombia India and Indonesia.

Figure 3.2. Scores for High Performing Middle-Income Countries



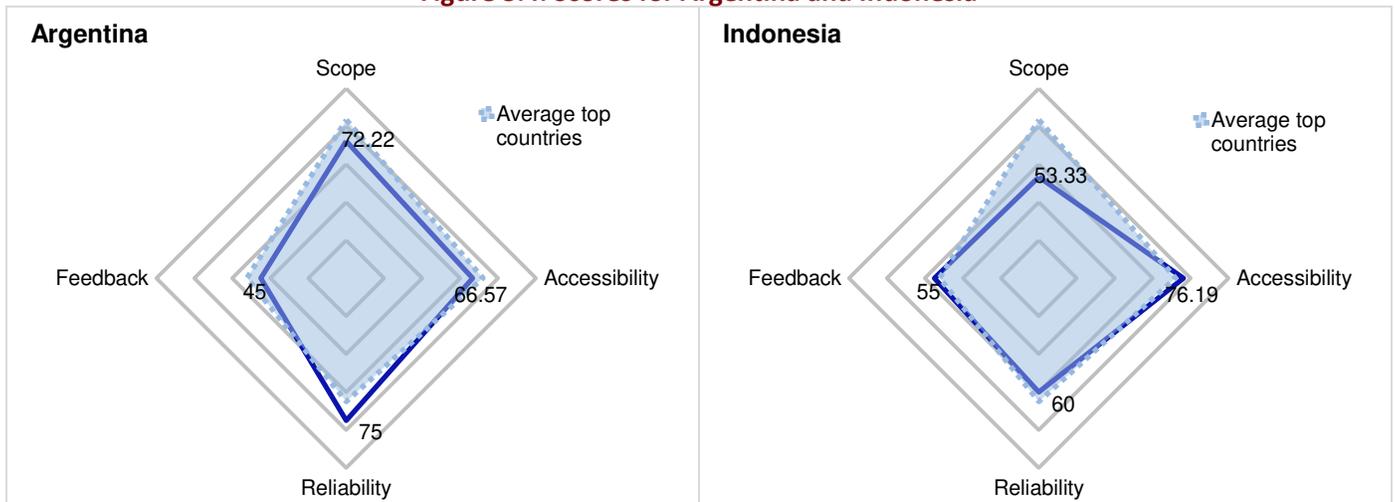
Two of these countries (Colombia and India) hover right under the high marks for each of the dimensions. Of these two, Colombia stands out for its very high feedback scores owing to the publication of a very detailed report on website users and feedback received (see Figure 3.3).

Figure 3.3. Scores for Colombia and India



Argentina and Indonesia are outliers. They have lower scores under scope (they disclose less information, or in a less comprehensive way) but perform more consistently across the other dimensions (see Figure 3.4). Indonesia just makes the cut on account of its consistency (it does not score under 50 in any dimension) while Argentina makes the cut on account of a very strong score in reliability (it dates documents, databases and query results, and is one of the very few countries that partially registers changes made to datasets).

Figure 3.4. Scores for Argentina and Indonesia



Mexico and Chile, two other middle-income countries that generally regarded as strong on disclosing fiscal information, are worth a closer look. Both perform very well on scope. They publish a broad range of detailed information and even detailed datasets with specific, granular information. They also have high accessibility scores, as they publish good guidance information and make datasets easily available (the one omission being that neither uses application programmable interfaces, or APIs, to facilitate access to the datasets through automatic programs or applications). They are, for all intents and purposes, very sound on these two dimensions. But both countries perform very poorly on reliability and feedback. They lack a publishing schedule, do not register changes to datasets, and do not provide a date and source for their information, data, or results from query tools. They also have only basic feedback features, with a generic form and no report-back mechanisms.

These two countries stand out because they could be among the top performers, and even leading top performers, with very minimal adjustments. They would then have a score that better reflects the comprehensiveness of the information that they publish. Germany, for example, which does make the list, has worse accessibility conditions than both Chile and Mexico but performs slightly better in reliability and feedback.

The same conditions apply to all the countries hovering around scores of 80 for scope of information (e.g. Honduras, Mali, Ecuador, Norway and Timor Leste). They publish more or less comprehensive data but have not made efforts to make this data more accessible or reliable.

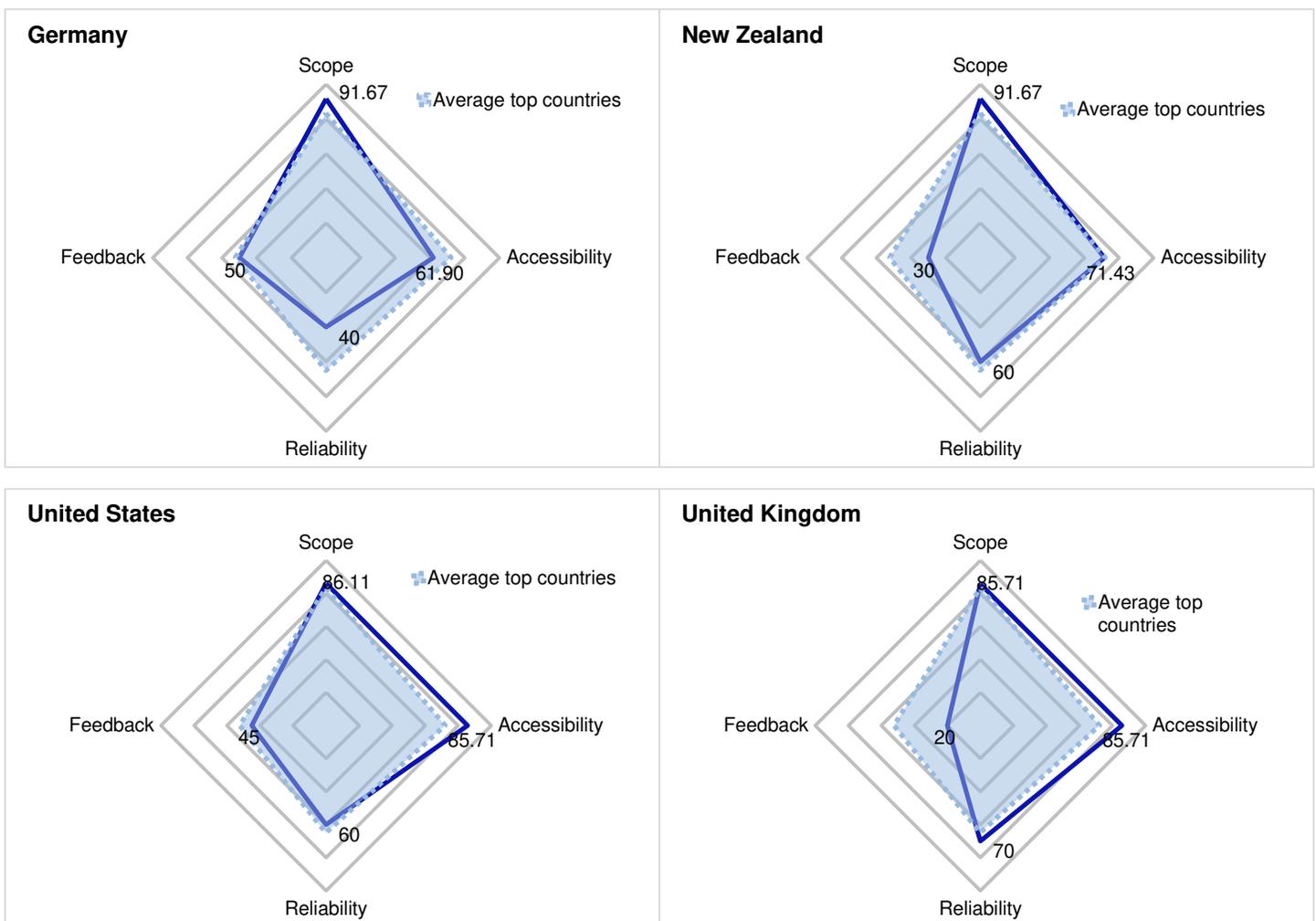
In sum, there are important lessons for advancing online fiscal transparency in the experience of high performing middle-income countries: small changes in the presentation of documents and data can go a long way. By introducing source and date information, countries can easily make their data more reliable. Likewise, even basic feedback mechanisms can go a long way towards improving overall scores and create the conditions for improved transparency and more responsive disclosure conditions over the long term.

3.2 The Puzzle of Poor Feedback and Good Practices to Strengthen it

France, as we have suggested, is the gold standard of online fiscal disclosure, given its consistently high scores, its top performance in reliability, and its strong score for feedback through the use of a detailed user statistics dashboard on its open data portal.

A quick look at the other four developed countries among the top performers, however, yields an intriguing puzzle: they all perform very poorly on feedback, below even the already low average among top performing countries. This reflects the fact that they have few mechanisms to collect comments, questions, and suggestions from citizens and users. They also fail to report back on user feedback or even statistics (see Figure 3.5).

Figure 3.5. Scores for Germany, New Zealand, the U.S., and the UK



Why do these countries, which otherwise have a strong accessibility record and publish comprehensive information and data, have so little interest in hearing back from users? Why do they not even report on how many people use the websites or platforms and the type of information they consult?

As we indicated in the introduction, this assessment cannot answer that question, which would require hearing back from the authorities in charge of online disclosure. But it can help us identify what good feedback looks like, how it appears to mobilize interest and engagement, and identify good practices to spur improved voice, participation, and responsiveness in the discussion of online fiscal transparency.

Box 2. Differences in Open Budget Survey and Online Disclosure Scores

As discussed in Box 1, the Open Budget Survey (OBS) scores and the online disclosure scores are different and complementary. We can expect differences in the scores, because the tools measure different things. In some cases, however, the differences are so pronounced that they are worth explaining.

A first set of countries with notable differences includes top performers on the transparency measure of the OBS, South Africa and Norway. These countries are ranked 3rd and 4th on transparency, scoring 86 and 84, respectively. In both cases, the online disclosure score attested to their having a broad range of information disclosed but not enough accessibility and reliability mechanisms.

Specifically, Norway is near the top of scope of online disclosure scores, but it scores 50 for accessibility; it has no query tools for exploring datasets which are only accessible in proprietary formats (.xls). It also scores 30 on reliability, because it does not have a publishing schedule, fails to date stamp or reference sources on the interactive datasets available online, and does not register changes.

South Africa scores slightly below the level of top performers on scope of online disclosure because, despite publishing extensive budget information, it does not publish information on the methods and basis for the calculation of key estimates, including revenue and tax

expenditures, and check-book level information, among other things. It also lists very few datasets publicly, none of which are interactive. It also falls far short of the average scores on accessibility and reliability.

A second group of countries with notable differences includes Lebanon and Egypt, which score low and below average on the OBS but have good scope of online disclosure practices in this assessment. Upon review of the information they provide online we can attest that there are significant documents with detailed information that may not be part of the official budget documents, but which afford citizens and users good, actionable information for monitoring spending, including detailed accounts of cooperation and donor funded projects, as well as some detail on infrastructure projects. They are still far below the average and the fray, so their position in the online disclosure assessment should be no cause for celebration.

A third and final group includes two countries that scored far better in the OBS than they do in the online disclosure assessment, Botswana and Malawi. We did not find significant information disclosed online. While the countries may have sound and thorough official documents, they do not include methodological notes or granular information in the documents they disclose online. And they do not disclose datasets, interactive or otherwise, so their scores for accessibility and reliability are very low.

3.3 Some Emerging Good Practices

Scope

Countries that do very well on the scope dimension tend to produce exhaustive information on both budgets and revenues. The countries that stand out, however, publish three things that most other countries do not:

- 1) Detailed methodology information for the analysis of revenue estimates and tax expenditures.
- 2) Granular, detailed, checkbook-level information for monitoring government expenditure.

3) Procurement information.

In addition, the production of specific reports (and datasets) on infrastructure spending and international aid makes it very easy to monitor and follow up on the progress and results of specific projects. While many countries report on infrastructure spending, only a handful of countries (the U.S., Mexico, Chile, and New Zealand) publish specific reports that make it easier to find and monitor specific projects.

Accessibility

Good guidance documents can make a big difference for enabling access to the budget information. The guidance produced by France, the Kyrgyz Republic, New Zealand, and Mexico stands out among the best. It is incorporated organically in the website and it leads users through different types of information. Independently of whether countries have detailed documents and guidelines, weaving guidance materials in the online fiscal disclosure platform makes a world of difference. Closely related to the above, most countries use portals and ministry websites concurrently and complementarily, but only the United States and New Zealand allow you to jump from one place to another through links. Cross-referencing available information is paramount to allow users, who may not be familiar with the documents, to access them. This should be considered a priority in all countries. Furthermore, links to reference and guidance materials where only datasets are hosted (especially open data portals) is especially important. Among the countries evaluated, only France provides such links.

Many countries already publish a broad range of information, but do not publish granular information in searchable databases allowing for detailed monitoring of specific spending items.

Brazil, the Dominican Republic, Kyrgyz Republic, France, the United States, and Peru all provide granular, check-book level information. However, only Brazil, France, and the United States allow users to download this information. In other countries, such information can only be accessed through a query tool, which can make it very difficult to process large amounts of information or to cross-reference different searches.

Generally speaking, where countries have very detailed expenditure datasets, they should allow users to download the entire database wholesale. There is no technical reason not to do it and it makes a difference for expert users.

Only a handful of countries use APIs to facilitate automatic access to online databases (France, Brazil, the U.S., the UK, El Salvador, India, and Indonesia). Moreover, of those that do provide access to an API, not all of them explain easily and thoroughly how to access it. France and the United States have the most accessible materials, their example could facilitate API use in other countries where an API already exists.

Reliability

While many countries publish information on sources and dates of publication, the information of France, the Kyrgyz Republic, and the UK is by far the most complete. This helps to identify sources and track changes to the dataset. Users can also register to receive updates of changes.

In addition to source and date for the information and databases, it is just as important to source and date the partial results (tables and graphs) produced by query tools. France, Argentina, the Dominican Republic, Peru, Guatemala, and El Salvador all allow the use of query tools and stamp the results with source and data information. Countries with query tools already in place should make this a priority.

While many countries have a partial log of changes to its data, only France has a specific registry of all changes already made, included into the information for the databases in the open data platform. All countries that publish data through budget transparency platforms could easily track changes and incorporate them into their description of the datasets.

Feedback

It is good practice to design a virtual space for users to provide feedback, which France has done for its open data portals. Figure 3.6 shows the different types of users and the members of virtual discussion forums, while Figure 3.7 shows one of the virtual forums.

Figure 3.6. French Open Data Portal – Users and Forums



This virtual forum has many visible advantages. It allows users to see how many people have used information, what has been used recently, and how different profiles interact with one another when authorities have updated new information or when community members have commented on or published addenda to specific datasets.

The creation of virtual communities of users is a trend among open data portals but only a few use budget information extensively. While difficult to capture in still images, a look at the interaction in these portals affords users a sense of how easy it can be to communicate with the authorities responsible for the publication of a database, and to receive support from other users. The possibility of registering for updates to a particular dataset also allows users to know when discussions are taking place.

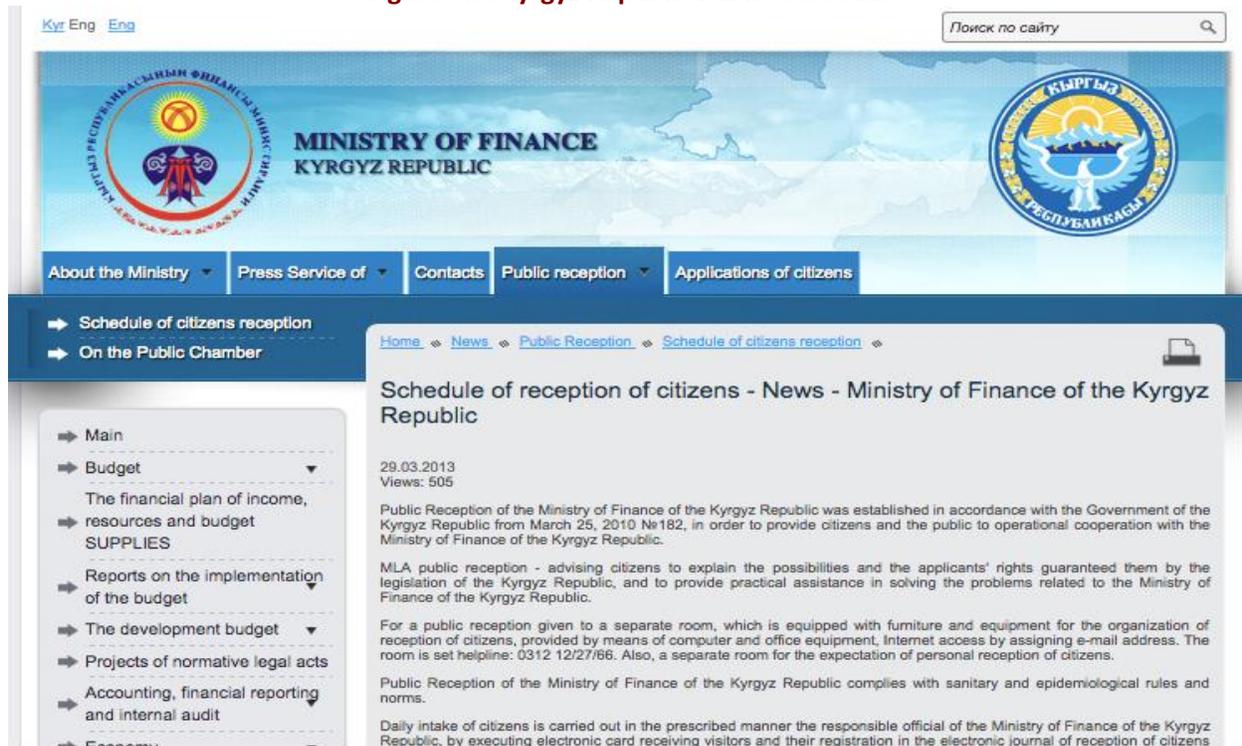
Figure 3.7. French Virtual Forum



The U.S. has created a specific sub-site on the online programming platform GitHub to facilitate access to its budget and expenditure database. Interested citizens can see what the community of users has done with the data, helping make it more accessible and relevant. This is interesting, given that the same database in the White House is presented without any interactive features.

Another alternative is to facilitate direct access to public officials in charge of the datasets. The Kyrgyz Republic budget website, for example, lists basic user statistics and has a static feedback form but it also publishes a schedule identifying spaces when public officials in the ministry can meet citizens (see Figure 3.8).

Figure 3.8. Kyrgyz Republic Public Outreach



Other countries list specific contact information for public officials in charge of data and information, but only the Kyrgyz Republic, France, and the U.S. (through the GitHub portal) make it easy to contact them.

France, Kyrgyz Republic, and a couple of other countries provide aggregate feedback of how many people use the site. Only Colombia and Ecuador produce a regular report of what people are seeking when they use the website, when they engage authorities using the website information, and the type of feedback and responses received.

The Colombian report, particularly, should be considered good practice. It lists the type of questions received and responses given in very specific detail. It produces aggregate statistics and information on the varied types of feedback mechanisms (call-center, email, online chat,

and static form). It also includes specific detail of the persons in charge of writing and revising the report.⁶

4 Conclusions and Recommendations

This paper reviewed practices for online disclosure of fiscal information utilized by 80 governments across the world which are covered in the 2015 Open Budget Survey. It developed a methodology based on four dimensions (scope, accessibility, reliability and feedback) to assess websites and portals through which governments publish budget-related information and data, and identified emerging good practices. The findings show that a diverse set of countries (including many middle-income countries) are increasingly employing innovative ways of disseminating budget information online. Many of the examples of good practice that we identified come from budget portals, which provide access to a broad range of fiscal data in user-friendly formats. While relatively new, portals have great potential to improve both the accessibility and the usability of budget data, and the findings clearly show that countries that have invested in dedicated portals perform better across the four dimensions. For this reason, all countries should be encouraged to establish a dedicated portal for disseminating budget information.

More specific recommendations depend on the existing online disclosure practices of each country. To facilitate the identification of relevant actions that governments could undertake, we have grouped countries depending on their performance across the four dimensions.

Countries with high scores on scope of information, that already publish exhaustive and comprehensive information but have lower than average accountability and reliability scores, should focus on accessibility first, reliability later. This means creating and publishing better guidance documents to make sense of the information online as well as ensuring existing datasets are tagged, described, and downloadable without restrictions.

⁶ See

http://www.minhacienda.gov.co/portal/page/portal/HomeMinhacienda/atencionalciudadano/Estadisticas/2015/Informe_de_Gestion_Febrero_2015.pdf

Countries with high scores for scope and accessibility of budget information, for example, should focus on improving its reliability. This means creating the mechanisms for identifying changes in the datasets, identifying the source of each dataset, and logging changes to the datasets. These measures can be easily undertaken and could greatly improve the use of data by citizens.

Countries with budget transparency portals that do not comply with open data principles and practices (e.g. the Dominican Republic, Colombia, Peru, Guatemala, and El Salvador) should open up bulk access to their budget databases. Access to granular data is important and facilitates searches, but it can also be a hindrance to expert analysis. Most expert users want to conduct monitoring through large downloaded datasets rather than through online query tools.

Countries that already have good open data and budget portals should link and cross-reference information between sites. This will facilitate access to guidance for data users and access to data for basic users. It also should be focused on open licensing information, which is not everywhere consistent. The U.S. and the UK can serve as examples of good practices on cross-referencing licensing information that can be followed by other countries.

All countries need to explore why they have not developed better feedback and reporting mechanisms. Along with cross-referencing links, improving feedback should be a priority for experts in the open data and budget transparency fields. Countries with very low feedback scores should for example create an online community of users, or at the very least report on usage and basic feedback received. Small changes in this area have the potential to yield big results in a very short time frame.

Annex 1. Expert Interviewees

Name	Position / Capacity
Benjamin Hill	Policy and systems expert, Former General Director for Budget Transparency in the Ministry of Finance, México; creator of the Mexican Budget Transparency Portal
Cem Dener	Senior Public Sector Specialist, Governance and Public Sector Management, World Bank
Charles Scheiner	Budget information user, researcher at the East Timor Institute for Development Monitoring and Analysis
Daniela Díaz	Budget information user, researcher at Fundar, Center for Analysis and Research
Diego de la Mora	Budget information user, Budget and Policy coordinator at Fundar, Center for Analysis and Research
Gisele Craveiro	Expert, author, professor at the <i>Colaboratório de Desenvolvimento e Participação</i> (Development and Participation Collective Laboratory) University of São Paulo, Brazil.
Hector Villareal	Budget information user, director of the <i>Center for Budgetary and Economic Research</i> in México and former director of the Mexican congressional <i>Center of Public Finance Studies</i>
Liliana Ruiz	Budget information user, researcher at <i>Fundar, Center for Analysis and Research</i>
Lucy Chambers	ICT, fiscal and budget information expert. Independent consultant and former director of research at the <i>Open Knowledge Foundation</i> .
Marco Cancino	Budget information user, director of <i>Inteligencia Pública</i> , policy research center in México.
Mariana Campos	Budget information user, Budget coordinator at <i>México Evalúa</i> , fiscal and policy research center in México.
Oluseun Onigbinde	Budget information user, director of <i>BudgIT Nigeria</i> , fiscal and ICT advocacy organization in Nigeria
Rodolfo Córdova	Budget information user, researcher at <i>Fundar, Center for Analysis and Research</i>
Sunny Villa	Budget information user, researcher at the <i>Center for Budgetary and Economic Research</i> (México)

Annex 2. References

- Begin, Nathalie and Carmela Zigoni (eds.). 2014. *Measuring Open Data's Impact of Brazilian National and Sub-National Budget Transparency Websites – And its Impact On People's Rights*. Brasilia: Instituto de Estudios Socioeconómicos – INESC. Available online at: http://www.opendataresearch.org/sites/default/files/publications/Inesc_ODDC_English.pdf
- Braunschweig, Katrin, Julian Eberius, Maik Thiele and Wolfgang Lehner. 2012. "The State of Open Data. Limits of Current Open Data Platforms." Paper presented in WWW12 conference – Web Science Track.
- Caba Pérez, Carmen, Manuel Rodríguez and Antonio López. 2008. "E-Government Process and Incentives for Online Public Financial Information", *Online Information Review*, Vol. 32 No. 3, 2008. pp. 379-400.
- Chambers, Lucy, Rufus Pollock and Velichka Dimitrova. 2012. *Technology for Transparent and Accountable Public Finance*. London, UK: *Open Knowledge Foundation*. Available online at <http://community.openspending.org/research/gift/>
- Craveiro, Gisele, Marcelo Tavares and Joao Porto. 2013. *Assessing Open Government Budgetary Data in Brazil*. Sao Paulo: Seventh International Conference on Digital Society (ICDS). Available online at http://internationalbudget.org/wp-content/uploads/icds_2013_1_40_10183.pdf
- Davis, Benjamin and Phineas Baxandall. 2014. *Following the Money 2014 - How the 50 States Rate in Providing Online Access to Government Spending Data*. Washington DC: U.S. PIRG Education Fund. Available at: <http://www.uspirg.org/reports/usp/following-money-2014>
- Dener, Cem and Saw Young Min. 2013. *Financial Management Information Systems and Open Budget Data*. Washington DC: The World Bank. Available at: <http://go.worldbank.org/JWVECI5D50>
- Lee, Samuel S. 2014. *Open Financial Data: Demand, Capacity and Citizen Engagement in Online and Offline Communities*. Washington DC: The World Bank. Available at: http://riwi.com/wp-content/uploads/2014/07/OpenFinancialData_WBGroup_SLee.pdf
- Murillo, Martin. 2015. "Evaluating the role of online data availability: The case of economic and institutional transparency in sixteen Latin American nations". *International Political Science Review*, Vol. 36(1): 42–59.
- Open Knowledge Foundation. 2014. *Global Open Data Index*. Available at: <http://index.okfn.org/>
- Organization for Economic Cooperation and Development. 2014. *Draft Principles of Budgetary Governance*. Paris: OECD. Available online at: <http://www.oecd.org/gov/budgeting/Draft-Principles-Budgetary-Governance.pdf>

Sunlight Foundation. 2010. *Ten Principles for Opening Up Government Information*. Washington DC: Sunlight Foundation. Available online at: <http://sunlightfoundation.com/policy/documents/ten-open-data-principles/>

Sunlight Foundation. 2014. *Open Data Policy Guidelines*. Washington DC: Sunlight Foundation. Available online at <http://sunlightfoundation.com/opendataguidelines/>

United Nations. 2014. *United Nations E-Government Survey 2014: E-Government for the Future we Want*. New York: United Nations. Available at: <http://unpan3.un.org/egovkb/Reports/UN-E-Government-Survey-2014>

World Wide Web Consortium. 2009. *Publishing Open Government Data*. Cambridge, MA: World Wide Web Consortium (W3C). Available online at: <http://www.w3.org/TR/gov-data/>