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## State of Play: Re-use of Budget Data

Author: Tom Kronenburg

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## Keywords

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## Abstract

Budget data contains information about national and local government budgets. Access to, and a better understanding of, budget data by the general public leads to broader public engagement in government budgetary processes. This engagement can promote substantive improvements in governance and decrease poverty among citizens. This report provides an overview of international initiatives regarding open budget data, of the re-use that is made of budget data and the remaining barriers to re-use of budget data.

The main re-users of budget data are journalists and transparency groups. News media produce budget visualizations to illustrate annual budget data and to report on changes brought about by budgets as part of the political news process. Transparency groups usually focus on transforming and presenting budget data, in ways other than those used by governments, to enable useful analysis of budget data. However, these groups have to invest considerable time and resources in this work because, while all EU countries publish (national) budget data in one form or another, almost none of them publish data in a structure or format that is suitable for re-use. Most budget data is published on websites (HTML files) or, more commonly, in the form of PDF files that hold the text of the budget.

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## Abstract

Budget data contains information about national and local government budgets. Access to, and a better understanding of, budget data by the general public leads to broader public engagement in government budgetary processes. This engagement can promote substantive improvements in governance and decrease poverty among citizens. This report provides an overview of international initiatives regarding open budget data, of the re-use that is made of budget data and the remaining barriers to re-use of budget data.

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# 1 Introduction

The euro-crisis and the ever growing demand for financially responsible and efficient governments have created an acute demand for budget data by civil society, companies, think tanks, academia, and citizens. Faced with increased taxes and budget cuts, the public opinion is very sensitive to any information on public budgeting and spending.

Generally, the availability of budget data in raw, open formats can have important effects: preventing corruption or waste of public money, improvements in governance, increasing public participation and the citizens' trust in their administration by helping them understand what their taxes are used for.<sup>1</sup> Civil society organisations have also been using budget data to hold governments responsible for the realization of economic, social and cultural rights, such as the right to education, to fight against inequalities, or to reduce poverty.<sup>2</sup>

Many democracies have a tradition of budget transparency, in that governments provide information to parliament and media on their budgets and spending activities. However, this information was generally not available as open data. However, the broad attention for budget and spending data from the open data community has considerably increased transparency throughout the European Union and in many other countries, particularly thanks to the efforts on making data comparable and easily accessible through the creation of user-friendly visualisations.

After outlining what is understood under the term budget data, the report looks at international initiatives on opening budget data and the re-users of budget data. It then discusses some remaining barriers to re-use. Finally, it gives an overview of national initiatives in EU Member States on budget data.

## 2 Budget Data

Budget data contain information about the planned incomes and expenditures by governments, in other words how the government will use public resources to meet the public's needs.<sup>3</sup> They are available for many different levels of government, including national, supranational and international government, regional and local government, but also for separate public sector bodies and government agencies. The data generally also include references to the receiving entity or purpose. This may include specific institutions or departments, sectors of the economy (welfare, education, defence), particular programmes or projects, companies or other entities. Budgets are usually drawn up and made available on an annual basis, but they can also be monthly, quarterly, etc.

The Open Knowledge Foundation's OpenSpending project defines budget data as "*Budget information generally reflects the outcome (or status) of a financial programming process within*

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<sup>1</sup> M. Fioretti (2010), *Open Data, Open Society: a research project about openness of public data in EU local Administration*, <http://stop.zona-m.net/2011/01/the-open-data-open-society-report-2/>.

<sup>2</sup> INESC (2009). *Budget and rights: developing a budget analysis method from the perspective of human rights*, <http://www.inesc.org.br/news/2010/march/nt-157-budget-and-rights-developing-abudget-analysis-method-from-the-perspective-of-human-rights>.

<sup>3</sup> See <http://internationalbudget.org/what-we-do/major-ibp-initiatives/open-budget-initiative/>.

government. For this purpose, data on past outcomes and appropriations for a future period are often presented jointly. Allocation is typically structured across one or many classification schemes (rather than by the actual recipients of funds). Since budget information is often based on aggregated data and statistical estimates, much of the literature on the publication of statistical information applies to it”.<sup>4</sup>

Closely related to budget data is spending data, which refers to single payment operations and does not contain aggregate data. According to the Open Knowledge Foundation, “[s]pending data can include various types of records, including information on government grants, commitments and actual expenditure. However, we don’t expect spending data to include aggregate information. This means that while several physical payments may be consolidated into a single item, each payment from one entity to another made for a specific purpose (project, service) on a given date or during a given duration should be listed individually. Reporting data about spending that has been further aggregated will demand different modes of analysis and should instead be treated as budget data”.<sup>5</sup> A subset of such spending data is public procurement data: what was tendered, for how much and who won the tender.

## 3 International initiatives relating to open budget data

### 3.1 Open Budget Initiative

The Open Budget Initiative is a global research and advocacy programme under the auspices of the International Budget Partnership, which in its turn is a project of the US-based Center on Budget and Policy Priorities.<sup>6</sup> The Initiative aims to promote public access to budget information and the adoption of accountable budget systems.<sup>7</sup> It collaborates with civil society organisations worldwide to raise public awareness of the connections between budget transparency and daily life.

The Open Budget Initiative launched the *Open Budget Survey*, a comprehensive analysis that evaluates the availability of budget information for public access and the opportunities for the public to participate in the budget process at national level. The survey was first conducted in 2006 and is repeated bi-annually. In the 2010 survey, over 90 countries were included. Next, the Initiative also created the *Open Budget Index*, to measure the overall commitment to transparency of the countries included in the survey. The index assigns a score to each country, based on the information it makes available to the public throughout the budget process.

### 3.2 First Global Assembly for Budget Transparency, Accountability and Participation

In November 2011, almost 100 civil society groups from 56 countries and 12 international organisations gathered under the hat of the global Civil Society Movement for Budget Transparency, Accountability and Participation. The movement strives for “*public finance systems that make all*

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<sup>4</sup> See <http://openspending.org/help/types.html>.

<sup>5</sup> Ibid.

<sup>6</sup> See <http://www.cbpp.org/>.

<sup>7</sup> See <http://internationalbudget.org/what-we-do/major-ibp-initiatives/open-budget-initiative/>.

*budget information easily accessible, provide meaningful opportunities for citizens and civil society to participate in budget decisions and oversight throughout the process, and include strong institutions to hold governments accountable for how they raise and spend the public's money”<sup>8</sup>.*

The movement adopted the Dar es Salaam Declaration on Budget Transparency, Accountability and Participation, calling upon, among others, all national and subnational governments to recognize, legislate, enact and operationalize the right to information generally and to public budget information specifically; and to publish and disseminate budget information in easy and accessible formats through all possible means, including digital open data formats through the internet, public libraries, information centres, etc.<sup>9</sup>

## 4 The Openness of Budget Data of the EU Member States

### 4.1 The Open Budget Index

The Open Budget Index (OBI) ranking is built from a questionnaire that is filled out by academic researchers and NGOs in each of the countries surveyed. Among these are Access Info, Spain; the London School of Economics, United Kingdom; and the Chr. Michelson Institute, Norway. The questionnaire contains 192 questions that focus on the transparency and availability to the public of eight main budget documents.<sup>10</sup> Responses to the questionnaire help determine whether each of these eight documents is available to the public. Availability to the public is a major criterion within the OBI survey, and the IBP discerns four levels of ‘availability to the public’ of the budget documents:

1. Documents that are not produced at all.
2. Documents that are produced but are either for internal purposes only and so not made available to the public, or are made available to the public but not within a specified timeframe.
3. Documents that are produced and made available to the general public either free of charge or for a minimal fee, but only upon request to the relevant government office.
4. Documents that are produced and distributed to the general public either free of charge or for a minimal fee, and in such a way that the public can access the documents through means other than requesting them directly from the executive.

Unfortunately, there is no fifth level for documents that are available in open, easily re-usable formats, based on internationally accepted standards.

Not all EU Member States were included in the OBI ranking. In the diagram below, we can see that the United Kingdom and France, both with 87 points, and Sweden, with 83 points, are the only three EU Member States that have really open budgets. Slovenia (70), Germany (68), Poland (64), Spain (63)

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<sup>8</sup> See <http://one.org/blog/2011/11/21/citizens-and-civil-society-tell-governments-make-budgets-public-now/>

<sup>9</sup> See <http://www.makebudgetspublic.org/the-dar-es-salaam-declaration-on-budget-transparency-accountability-and-participation/>.

<sup>10</sup> Executive Budget Proposal, Pre-Budget Statement, Citizens’ Budget, Enacted Budget, In-Year Reports, Mid-Year Review, Year-End Report, and Audit Report. For more information on the OBI survey and its methodology, see [http://internationalbudget.org/wp-content/uploads/GuideOBI2010\\_English.pdf](http://internationalbudget.org/wp-content/uploads/GuideOBI2010_English.pdf)

and the Czech Republic (62) have ‘significantly’ open budgets. Romania (59), Italy (58), Portugal (58), Croatia, Slovakia (57), and Bulgaria (56) have ‘some’ openness in their budget process. For the other 13 Member States, no information is included.

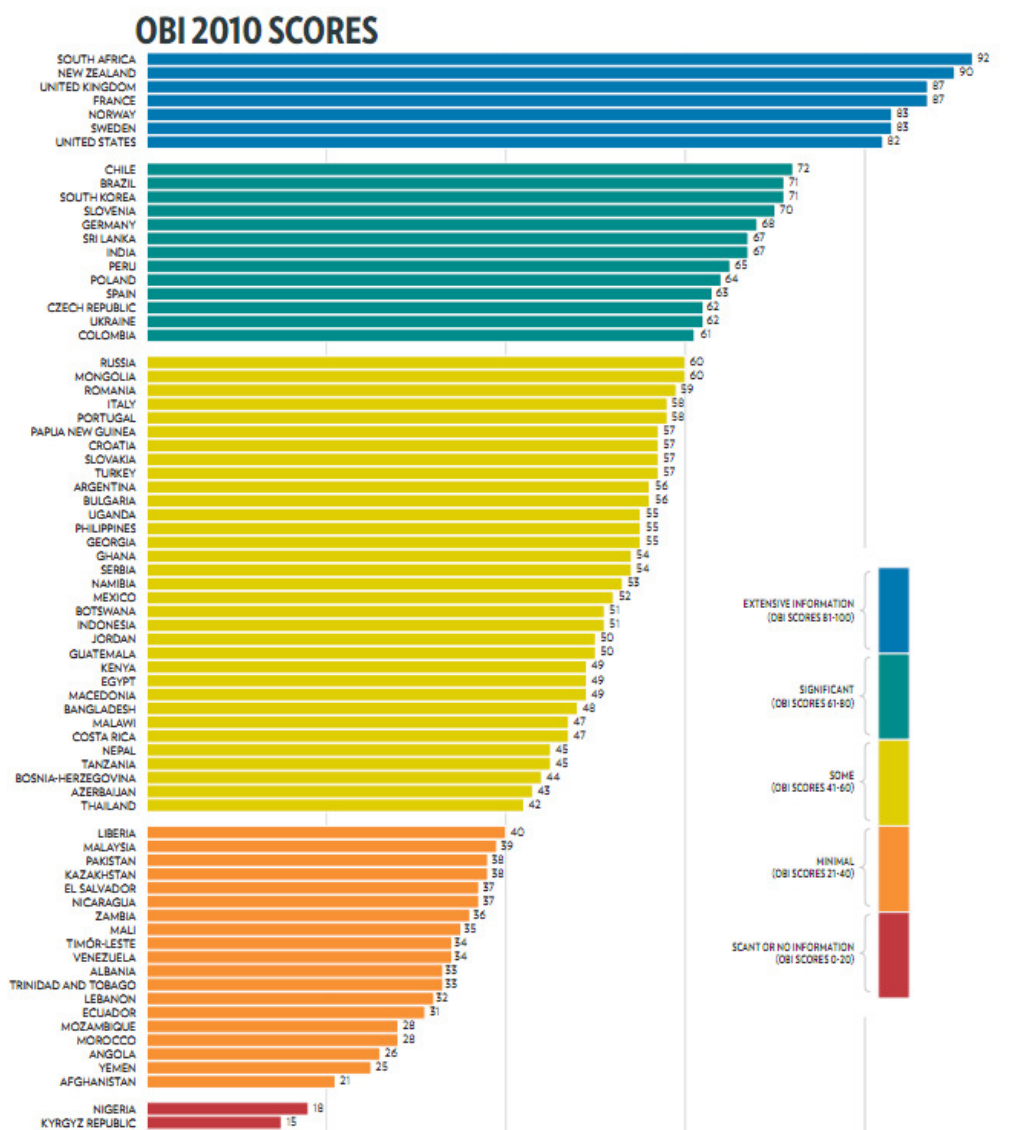


Figure 1. OBI 2010 scores<sup>11</sup>

## 4.2 Study on Open Budget and Open Data on Public Policies by Luigi Reggi

Luigi Reggi (Italy) cross-referenced the data from the Open Budget Survey with information on the level of openness and transparency of the data on the beneficiaries of the European Structural Fund (ESF) that all regions and Member States, acting as managing authority of the policy, must publish on the web. The ESF data are available as machine readable data.

His analysis resulted in the diagram below:

<sup>11</sup> See [http://internationalbudget.org/wp-content/uploads/2011/06/2010\\_Rankings.pdf](http://internationalbudget.org/wp-content/uploads/2011/06/2010_Rankings.pdf).



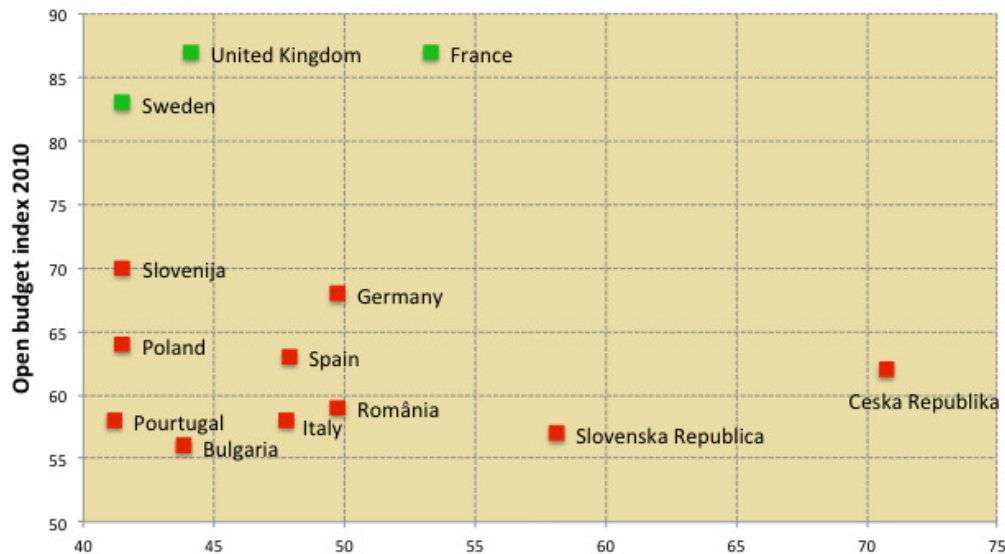


Figure 2. Transparency of the beneficiaries of EU structural funds, 2010<sup>12</sup>

According to the study, there was no correlation between the two indicators. With a possible exception of France, countries performing well on the OBI did not provide for great transparency with regard to the EU structural funds. This could be explained by the different purposes of the indicators: the OBI focuses on the quantity and the detail of the information disclosed, while the index of the transparency of EU structural funds focuses on the quality and format of the data.<sup>13</sup>

## 5 Re-Users of Budget Data

### 5.1 Commercial Re-use

Commercial re-use of budget data is mostly limited to the media's use of budget data to create insightful stories and interesting visualizations. To our knowledge, there is only one company that sells products based on budget data: Spikes Cavell, a consulting company on public spending. Spikes Cavell sells advisory services and tools to governments to help them optimize budget processes and actual spending. In their tools, the budget data is used for benchmarking and as input for data-transformation tools and services.<sup>14</sup> While the target group for commercial products based on budget data may currently be limited to political groups and lobbyists, considerable potential remains for creating a new position in the value chain, based on the specific knowledge required for interpreting budgets.

### 5.2 Academic Re-use

Budget data is an important part of academic research, particularly in the field of macro-economics and political science. For instance, the International Budget Partnership and the World Bank employ a number of economists who do comparative and case-specific research into national budgets. Other examples include the Ukrainian Institute for Budgetary and Socio-Economic Research<sup>15</sup>, and the US-

<sup>12</sup>See [http://www.luigireggi.eu/Innovation-policies/Home/Entries/2011/9/26\\_Open\\_Budget\\_and\\_Open\\_Data\\_on\\_Public\\_Policies.html](http://www.luigireggi.eu/Innovation-policies/Home/Entries/2011/9/26_Open_Budget_and_Open_Data_on_Public_Policies.html).

<sup>13</sup>[Ibid.](#)

<sup>14</sup>See <http://www.spikescavell.co.uk/products/inbrief.aspx>

<sup>15</sup>See <http://www.ibser.org.ua/news/435/?lang=en>.

based National Bureau of Economic Research.<sup>16</sup>

### 5.3 Governments and public bodies

The World Bank has created a tool called ‘BOOST’, which can be used by governments around the world to collect budget data, to analyse it and to improve their own budgetary process.<sup>17</sup> It is reported that the tool is used in 19 countries, with 2 countries even using it to make their budget data public.

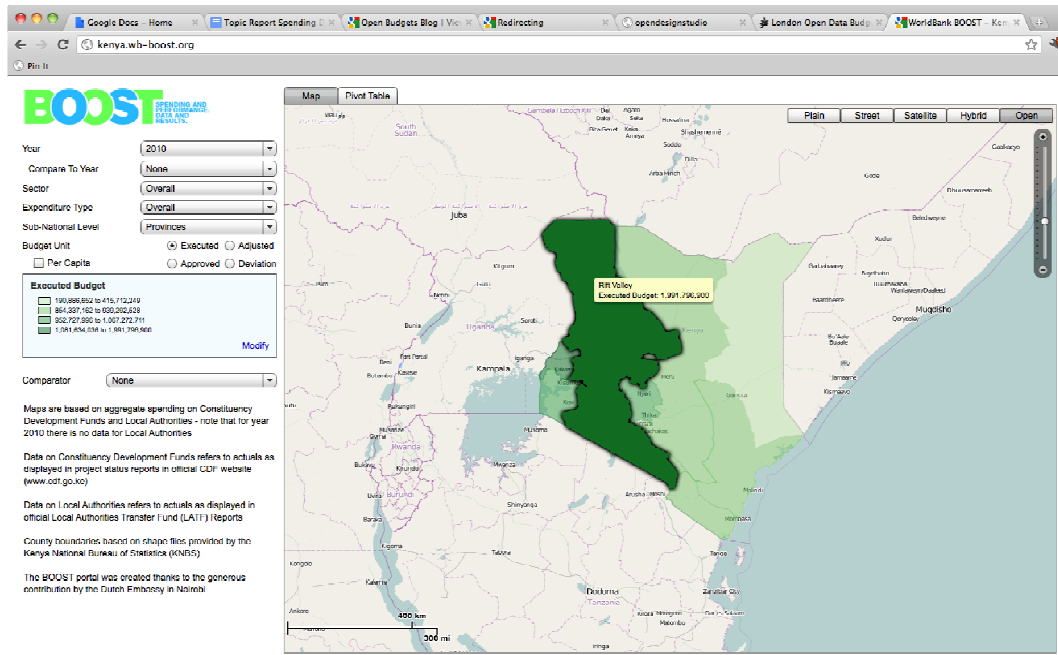


Figure 3. World Bank BOOST visualisation for Kenya<sup>18</sup>

### 5.4 Civic Hackers and Transparency Activists

The most visible group that has provided civic activists with tools to analyse budget data is the Open Knowledge Foundation. It created the ‘Where does my money go’ visualization website, as well as the OpenSpending project.

OpenSpending is by far the biggest project in visualizing both spending and budget data throughout Europe. OpenSpending software, including the typical treemap, is being used in countries like Germany<sup>19</sup>, Italy<sup>20</sup> and the Netherlands.

<sup>16</sup> See <http://www.nber.org/info.html>.

<sup>17</sup> See <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/ECAEXT/0,,contentMDK:23019567~pagePK:146736~piPK:146830~theSitePK:258599,00.html>

<sup>18</sup> See <http://kenya.wbb-oost.org/>

<sup>19</sup> See <http://bund.offenerhaushalt.de/>

<sup>20</sup> See <http://www.openspending.org/it-regional-accounts>.

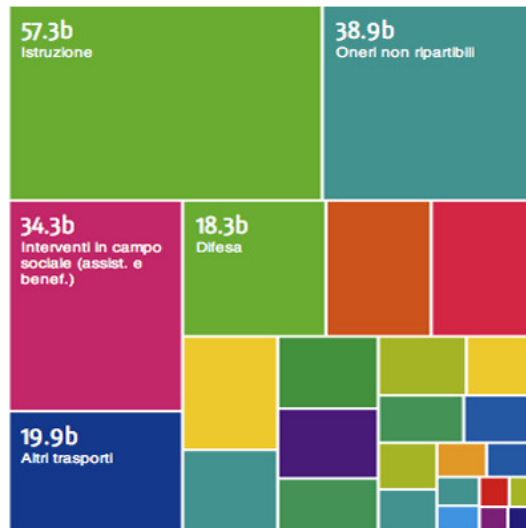


Figure 4. OpenSpending visualisation of Italian budget data

The OKF describes the objective of the OpenSpending project as: *“Our aim is to track every government and corporate financial transaction across the world and present it in useful and engaging forms for everyone from a school-child to a data geek.”* Even though the emphasis is on tracking spending, rather than on budget data, the OpenSpending software is used in a number of countries to visualize budgets as well.

Most of the effort that is put into the OpenSpending project is aimed at collecting data from PDF files and categorizing data according to meaningful categorization schemes.

‘Where does my money go’ aims to promote transparency and citizen engagement through the analysis and visualisation of information about UK public spending.<sup>21</sup> It was first developed in 2007 and was a winner of the UK Government’s Show Us a Better Way competition in 2008.<sup>22</sup>

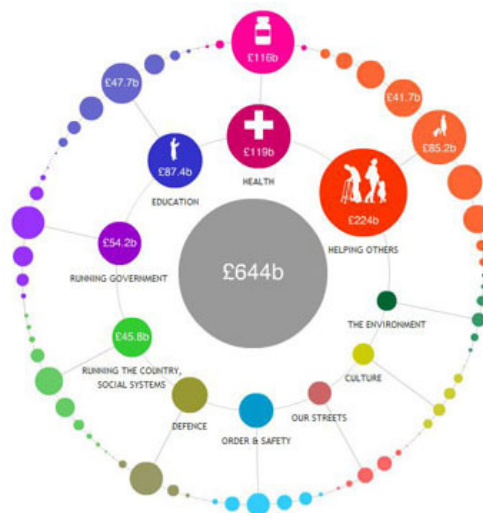


Figure 5. ‘Where does my money go?’ visualisation

Many other civil society organisations throughout the EU also promote openness in government

<sup>21</sup> See <http://wheredoesmymoneygo.org/about.html>.

<sup>22</sup> See <http://webarchive.nationalarchives.gov.uk/20100402134053/http://www.showusabetterway.co.uk/call/>.

spending. Examples are the Spanish Access Info group<sup>23</sup>, the Albanian Open Data initiative<sup>24</sup>, and the Polish Centrum Cyfrowe<sup>25</sup>. Even though these organisations focus (at least partly) on the budget itself, other groups, such as the Organised Crime and Corruption Reporting Project<sup>26</sup> and the Fair Play Alliance<sup>27</sup>, focus on government expenditure (spending data) and possible corruption that they wish to uncover from spending data. For them, budget data is a way to cross-reference spending and to see whether all expenditures were already apparent in the budget or whether they were unforeseen and, therefore, more suspect.

## 5.5 Approaches to Budget Visualization

Most of the re-users mentioned above rely on a number of main types of budget visualisation: the Infographic, the Static Bubble Chart and Treemaps, and interactive visualisations. While the former visualisation forms are static, interactive visualisations allow the users to create their own representation of the data.

### 5.5.1 The Infographic

An infographic is a picture of which the content, size, shape and element colours are determined by data. It is static, in that the creator chooses a perspective on the data and a message to convey to the viewer, who cannot alter the visual to match his or her perspective. An infographic is often used to convey the ratios between different numbers. Infographics are excellent for print, but are also often shared online. They can be used to convey a message and some underlying data. However, they are usually not suitable for communicating a multitude of data. Below is an example of a budget infographic from FST Europe.

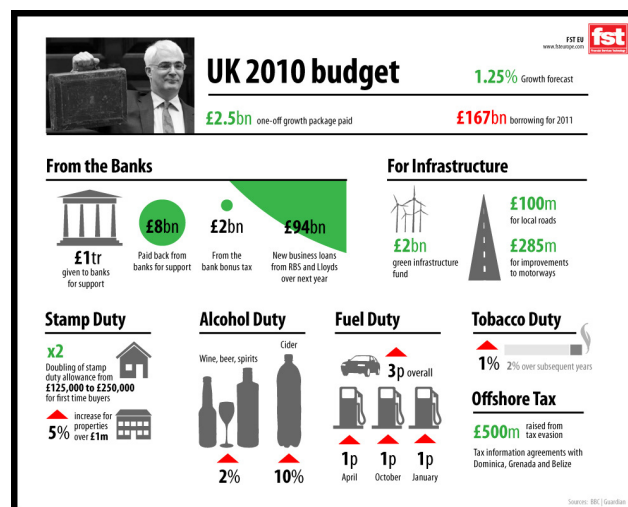


Figure 6. FST Infographic on UK 2010 budget<sup>28</sup>

<sup>23</sup> See <http://www.access-info.org/>

<sup>24</sup> See <http://open.data.al/en>.

<sup>25</sup> See <http://centrumcyfrowe.pl/>.

<sup>26</sup> See <http://www.reportingproject.net/occrp/>.

<sup>27</sup> [http://www.fair-play.sk/index\\_en.php](http://www.fair-play.sk/index_en.php).

<sup>28</sup> <http://www.fsteurope.com/news/the-uk-budget-2010-breakdown/>.

### 5.5.2 The Static Bubble Chart and Treemaps

Often, budgets are represented as bubble charts of various kinds. A bubble chart is a subtype of the scatter plot, where each data point is represented by a bubble instead of a point. The bubble's size, colour and position in the chart can be used to convey a value. Bubble charts are used to represent much larger quantities of data than can be represented in infographics. For instance, Jess Bachman made a bubble chart of the US federal budget, referred to as the "Death and Taxes Poster".<sup>29</sup> Inspired by the death and taxes poster is this similar looking bubble chart.

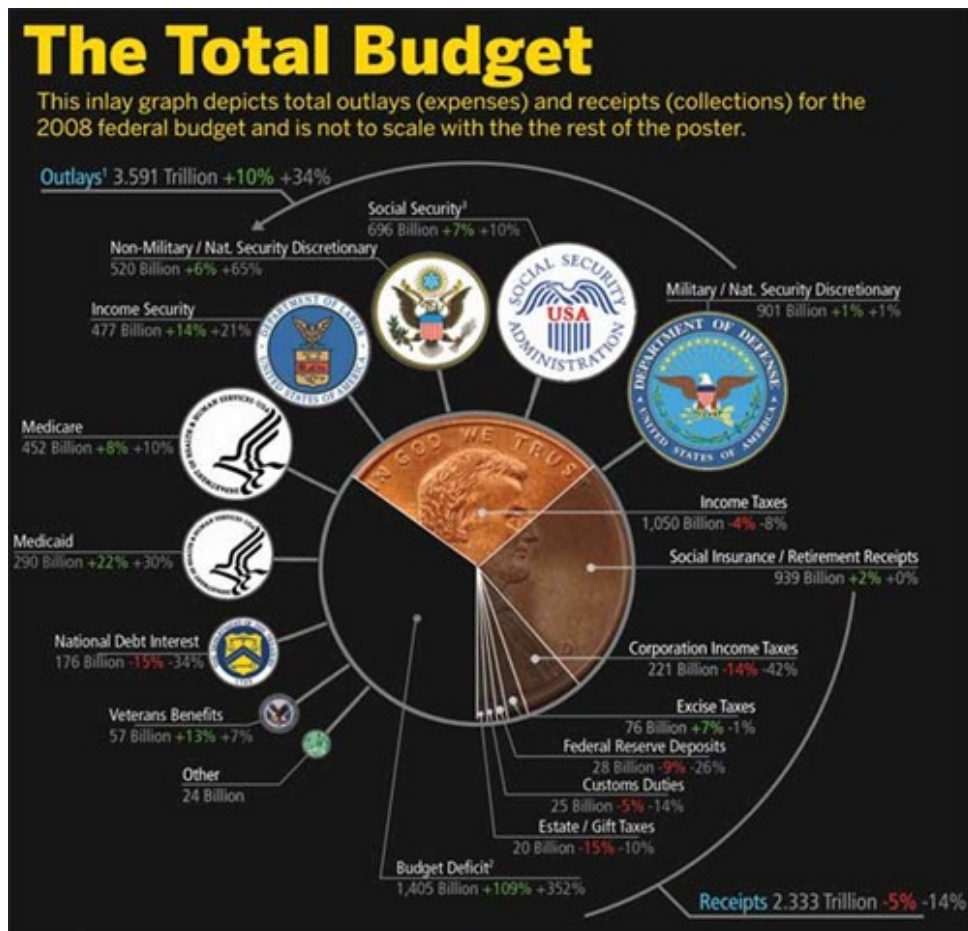


Figure 7. Bubble chart on 2008 US federal budget<sup>30</sup>

A second diagram that is regularly used, is the treemap. A treemap takes a (usually two dimensional) space and divides the area it occupies according to the relative sizes of the different budgets. A treemap is very well suited to represent budget data from differing levels of specificity. Also, it is the best way to visualize a complete budget. One can get an immediate sense of the total cost of a policy area, and its relevance in terms of the total budget. For instance, the figure below shows a part of the Albanian budget.

<sup>29</sup> <http://www.deathandtaxesposter.com>.

<sup>30</sup> See <http://www.getrichslowly.org/blog/2009/08/24/understanding-the-federal-budget/>.

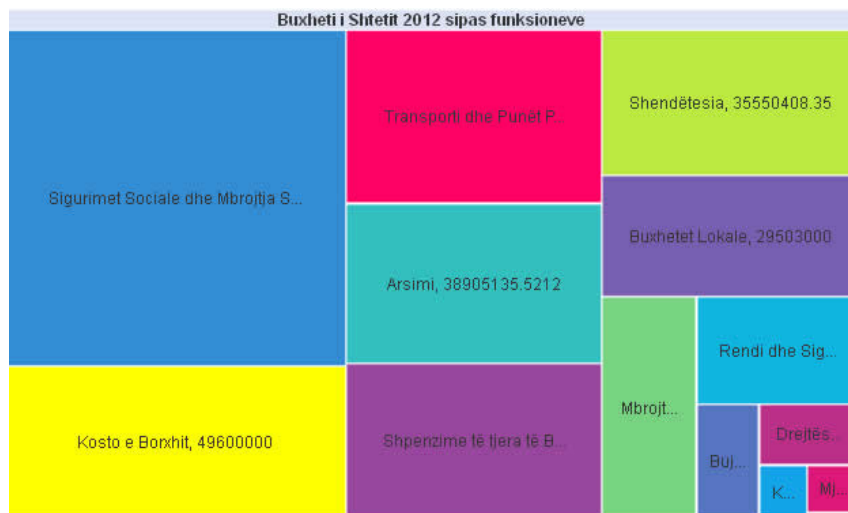


Figure 8. Visualisation of the Albanian budget for 2012<sup>31</sup>

Another example is the Billion Euro-o-Gram, a visualization that helps people get a grasp of the large numbers referred to in news reports. In this example, one can for instance compare the Greek debt to the fortunes of the ten wealthiest people in the world, the French deficit, the turnover of both eBay and the pharmaceutical industry, or the United Nations Budget.

### Billion Euro-o-Gram

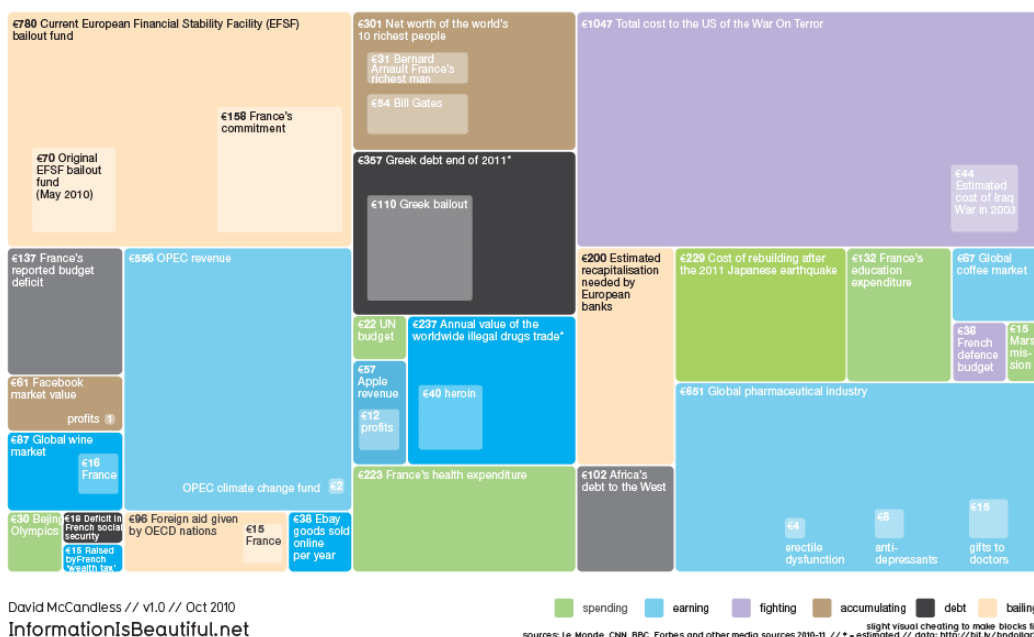


Figure 9. Billion Euro-o-gram<sup>32</sup>

<sup>31</sup> <http://open.data.al/sq/lajme/lajm/id/481/titull/Buxheti-i-Institucioneve-te-Qeverisjes-Qendrore-per-vitin-2012>.

<sup>32</sup> <http://www.informationisbeautiful.net/visualizations/billion-euro-o-gram/>.



## 5.6 Interactive Visualizations

Interactive visualizations generally take the form of bubble charts and treemaps, but clicking on an item in the diagram generates a new diagram with underlying information. Interactive visualizations allow for much more detail and provide more possibilities to discover new facts and relationships. Interactive visualization allows a person to create personalized views of the data. The chances of discovering interesting trends, facts and/or consequences within the data are therefore much higher.

Examples of good interactive visualizations for budget data include the Polish budget visualization by Centrum Cyfrowe<sup>33</sup> and the visualization by of the Dutch budget by Van der Wel.

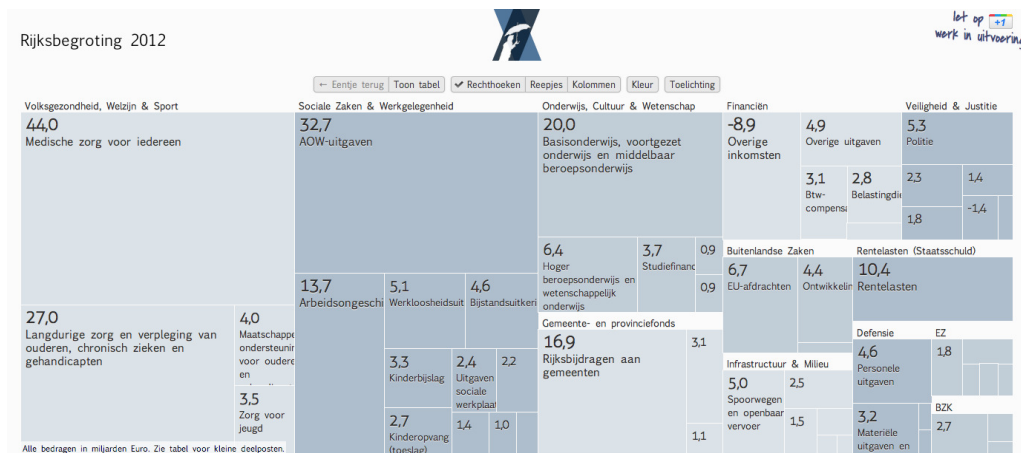


Figure 10. Van der Wel visualisation of the Dutch budget<sup>34</sup>

## 6 Barriers to Re-use

While there are many examples of re-use of budget data, particularly by civil society and activists, there are still a number of barriers to this re-use, many of which are encountered for many different types of PSI. While no complaints have arisen about lack of access to the data or high fees, other common barriers such as the lack of standardization or data delivery in non-machine readable formats remain. However, the main barrier to re-use of budget data is the aggregation of raw data into categories that are not comparable to other budgets.

### 6.1 Aggregation as a Standard

In a budget, expenditures and incomes are aggregated into categories of expenditures or income to aid the reader's understanding of the budget. The budget is, after all, a policy document used to provide the reader (be it politicians, citizens, journalists or academics) with an overview of the most important choices made by the government. The categorisation of these choices is the prerogative of the administration preparing the budget.

From a transparency point of view, it could also be useful to aggregate the data into different categories. For instance, traditional budgets generally focus on how the money is allocated to different functional areas within the government, but an overview of how the budget benefits

<sup>33</sup> <http://www.otwartybudzet.pl/>

<sup>34</sup> <http://vanderwel.me/rb/>.

different types of citizens or different geographical areas might be equally justifiable. With the current tools and resources available, it should not be difficult to build such alternative 'views' of budget data. The main caveat, however, is that re-users need to be able to break up the aggregated data in the budget into smaller, more detailed chunks that can be connected to these other views. The re-user will need the raw or underlying data to the budget in order to create such a view. This raw data would also have to be categorized according to strict categorization guidelines. Such classification guidelines may include accounting categorizations, functional classifications (such as the UN's COFOG (Classification of Functions of Government) or the OECD's DAC/CRS codes for sector/purpose classification. Classification schemes may also include less formally defined identifiers such as policy objectives, goals, initiatives, programmes, funds, etc. Such classification would allow for comparability between budget years and/or countries.

Currently, there are not many budgets that are available in formats that meet these internationally recognized categorizations. They do not follow a strict set of guidelines for the type of categorization; hence, they are 'harder' to compare to other budgets or to categorize on the basis of different criteria.

## 6.2 Formats

The main obstacle to re-use, however, is not the categorization, but mainly the format in which the budget data is released. Many budget documents are released as a series of PDF files. These files contain both text and tables that together comprise the budget data. Tables in PDF files are notoriously hard to convert into spreadsheets. In the process of copying content from PDF tables into a spreadsheet, one often creates 'merged cells', mixing columns and destroying the meaningful structures that are apparent to the human eye, but not to the various spreadsheet products and software. The main problem is that the data is not available in a 'machine readable format'. In order to promote re-use, governments should also release the underlying data in the form of spreadsheets (CSV, XLS or ODF) or (even better) well-annotated XML files. Unfortunately, hardly any government publishes its full budget in machine readable formats.

Non-governmental organisations like the Open Knowledge Foundation (UK, DE), Centrum Cyfrowe (PL), Hackdeoverheid (NL) and others across the EU put a lot of effort into restructuring PDF files into CSV files. For example, the Centrum Cyfrowe has published its own CSV and ODS files as an alternative to the official budget data.<sup>35</sup> The OpenSpending software<sup>36</sup>, which is used in a number of countries, is quite flexible in the input it takes, but it is still time-consuming for teams to break down the data in the different government documents into well-formatted CSV files.

## 7 Overview of initiatives in the EU

There is a lot of budget data available within the EU Member States, even though it might not always be formatted in ways that are beneficial to re-users. Still, we can see that in most Member States, groups are working on products that involve budget data. In this section, we give a list of local groups,

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<sup>35</sup> <http://www.otwartybudzet.pl/otwarte-dane-budzetowe/>.

<sup>36</sup> The OpenSpending software is open source and available at <http://docs.openspending.org/en/latest/install.html>



products and visualizations based on the budget data in the Member State. This list can be used as a reference to get in contact with others in your own country or in other Member States. The list also features a number of visualizations that can be used for inspiration when creating new budget data visualization.

- **EU-level**
  - The Guardian has created a visualization of the EU budget. It shows which States take the most and which give the most: [http://image.guardian.co.uk/sys-files/Guardian/documents/2012/01/26/EU27\\_Money.pdf](http://image.guardian.co.uk/sys-files/Guardian/documents/2012/01/26/EU27_Money.pdf)
- **Austria**
  - A Budget visualization for Vienna 2006–2009 is available at <http://openprocessing.org/visuals/?visualID=29813>
- **Czech Republic:**
  - <http://www.budovanistatu.cz> is a website that unlocks the Czech budget data from 2004 to 2010. Accounting data is enriched with analysis and insights, and every item is linked to data from the accompanying websites Nasipolitici.cz (politician profiles, spending data, government programs) and Kohovolit.eu (voting records and parliamentary activity). The application aims to find cases of inappropriate and inefficient spending of public money. It uses (amongst others) the ‘Where does my money go’ software to visualize the Czech budget.
- **Croatia**
  - <http://proracunskikalkulator.com> is a Croatian budget site where you can simulate your own budget choices.
- **Estonia**
  - Curated by the Garage48 team, the <http://meieraha.eu/> site shows what is possible when budget data is available for re-use in an open format and the COFOG classification is used.. This site also allows you to export budget data from the site, and to use it in a tool where you can simulate your own budget choices.
- **Germany**
  - In Germany, the OpenSpending software is used to open up the federal budget (<http://bund.offenerhaushalt.de/>) as well as the budget of a number of cities of which Munich is one of the larger ones (<http://muenchen.offenerhaushalt.de/>).
- **Greece**
  - Yannis Charalabidi created this visualization of the Greek budget: <http://t-government.blogspot.com/2011/06/greek-budget-visualisation-where-do.html>. It is based on the “Where does my money go” bubble chart.

- **Hungary**
  - <http://www.amipenzunk.hu/#/~koltsegvetesi-kiadasok> This project is based on the OpenSpending software and features the Hungarian budgets from 1995 to 2012.
- **Italy**
  - VISup srl and Frontiers of Interaction have created a visualisation of the Italian budgets. <http://blog.okfn.org/2011/07/27/visualising-italian-spending-data/>
- **Netherlands**
  - The Dutch collective Hackdeoverheid (HacktheGovernment) has announced on its website that it is working on a Dutch implementation of the OpenSpending software. <http://www.hackdeoverheid.nl/2011/09/nederland-aan-de-slag-met-open-spending/>
  - Marius van der Wel has made a treemap of the Dutch 'Rijksbegroting' and released it in beta on <http://vanderwel.me/rb/>
- **Poland**
  - "Open budget" is a project started by Centrum Cyfrowe Projekt: Polska, a Polish think-and-do-tank promoting open government in Poland. This webpage contains the Polish performance budget in an open format. Additionally, they have created an interactive visualisation of this budget data. <http://otwartybudzet.pl/en/about-the-project/>
- **Portugal**
  - Portuguese activists gathered on Transparencia Hackday Porto (<http://transparencia.hacklaviva.net/>) and created a site on public spending. This site, <http://www.despesapublica.com/>, tracks public expenditures that are published by various Portuguese institutions.
- **Slovakia**
  - The Fair Play Alliance has a website, <http://datanest.fair-play.sk/pages/index>, that focuses on public procurement, government spending and business registers.
  - On the pages of <http://www.visibledata.info/gallery>, one can find a gallery of cultural spending visualizations.
- **Spain**
  - <http://dondevanmisimpuestos.es/> is created and curated by Pro Bono Publica and the OKFN, and holds both national and regional budgets from 2008 to 2011.

- **United Kingdom**
  - OpenSpending (<http://www.openspending.org>) and “Where does my money go” (<http://wheredoesmymoneygo.org/>) both use the same datasets, stored in the OpenSpending data repository.
  - London has featured an app contest targeted solely at budget data. The aim was to make it easier for citizens to understand what’s going on in City Hall during the budget process: <http://www.budgetappcontest.com/>. The winners have created some great websites:
    1. <http://zoeandgavin.com/budgetapp/> is an app through which a user can make a number of policy choices, which are reflected in the amount of property tax the user has to pay on his or her home.
    2. [http://londonbudget.noahjstewart.com/budget/year/2009#circle\\_revenue](http://londonbudget.noahjstewart.com/budget/year/2009#circle_revenue), created by Noah Stewart, is an original budget visualization.
    3. <http://londonbudget.stevenshelby.com/category/802> is a more standard way of depicting budget lines.

## 8 Conclusions

A considerable amount of budget data is available in EU Member States. The International Budget Partnership concludes in its biannual research project, Open Budget Index (OBI), that EU Member States produce ‘open budgets’. They timely provide the general public with a number of crucial budget documents of acceptable quality. However, two major issues remain, one of which is not featured in the OBI research. The first issue is that many governments do not use internationally accepted standards (like COFOG) for reporting on their budget. They aggregate ‘raw’ budget data according to either self-developed categorizations or quite simply change the categorizations, both of which mean a great barrier to comparability of budgets between Member States, as well as over time.

The second barrier to re-use is that most budget data is only available in PDF format. The lack of machine readable data forces re-users to spend time and effort on copying, pasting and formatting content before they can start to create added-value budget data products.

Despite these barriers, there is considerable activity in the field of budget data. Civic activist groups such as the Open Knowledge Foundation (OKFN), Centrum Cyfrowe and others put a lot of effort into reformatting budget data and publishing it for the benefit of a wider audience. Journalists are also using budget data as the basis for political reporting. Both groups of re-users have a strong focus on visualizing the budget data to provide citizens with the possibility to better understand the data.

### About the Author

Tom Kronenburg is a consultant with Zenc B.V. based in the Netherlands. He specialises in information as a solution to societal problems. Tom is one of the curators of the EPSI Platform website and travels throughout the European Union to connect PSI holders and re-users, citizens and governments.

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