tax justice network

Terms of Reference: Open data portal on risk-based illicit financial flows

Proposals due: *4 September 2019*
Timings: *Portal to be published 1 January 2020 (work to start by 23 September 2019)*
Budget: *Maximum available budget is £13,000 including all expenses and VAT*
Reporting to: *Markus Meinzer, Director (Financial Secrecy), and Data Scientist (when appointed)*

Purpose

The Tax Justice Network is seeking qualified consultants to design and build an open data portal to allow interested stakeholders and members of the public to view, analyse, query and export a dataset that we have built on the risk exposure of a range of countries to illicit financial flows, and to incorporate automated updates and additions to that dataset in the future. This will be followed by a centralised portal for other datasets, so can be thought of in part as a test case.

Organisation

The Tax Justice Network is dedicated to high-level research, analysis and advocacy in the area of international tax and financial regulation, including the role of tax havens. Our objectives are to:

- Eliminate cross-border tax evasion and limit the scope for tax avoidance
- Increase citizens' influence in the democratic control of taxation
- Restore similar tax treatment of different forms of income,
- Remove tax and secrecy incentives that encourage the flow of investment capital from poorer countries
- Promote the role of tax in supporting economic development, poverty relief and more equal societies

Background

Illicit Financial Flows (IFFs) are flows that are deliberately hidden, to obscure either the illicit origin of capital and/or the illicit nature of the transactions undertaken. As such, they do not lend themselves easily to measurement or quantification. Given that secrecy is an enabling condition for IFFs to occur, an alternative approach is to analyse the degree to which countries are exposed to IFFs through their cross-border transactions with more or less secretive partners.

The more secretive a partner is, the more vulnerable to IFFs is the country that does business with it (through different types of economic transactions). And the more important that economic flow/stock is to the country's GDP, the more exposed it is to IFFs. For a particular flow or stock, a country's *vulnerability* to IFF is defined as the sum of secrecy-weighted flows as a share of total flows with all partners. The *intensity* of that flow or stock is then the sum of those flows/stocks as a share of a country's GDP. Therefore, a country's *exposure* to IFFs in a particular flow or stock is its vulnerability to IFFs multiplied by the intensity of that flow or stock.

The Tax Justice Network has produced a dataset that presents a global set of results of vulnerability, intensity, and exposure to IFFs for a range of economic flows and stocks. For each of 246 jurisdictions, it includes *eight* types of economic transactions with the other 245 jurisdictions: inward and outward banking positions, direct

investment positions, portfolio investment holdings, and trade. An example of the data for a specific country would be:

Country	Partner country	Year	Transactions (8 total)	Vulnerability	Exposure	Intensity
China	Belgium	2011	Inward banking	10	50	0.2
China	Belgium	2011	Outward banking	5	100	0.05
China	Belgium	2011	Inward trade	3	10	0.3
China	...	...	...	...	...	...
China	United Kingdom	2011	Inward banking	30	60	0.5
China	...		...	...	...	...

The dataset also contains other dimensions: time (2008-2018), country region (e.g. Europe), country income class (e.g. high-income), and other country-specific indicators.

Moreover, the vulnerabilities, exposures and intensities depend on how secrecy is measured. The first set of results uses the overall secrecy score of the Financial Secrecy Index. The second set of results uses individual Key Financial Secrecy Indicators (KFSIs) of the Financial Secrecy Index to zoom in on the consequences of different types of secrecy. Therefore the Tax Justice Network has created several tables for different Financial Secrecy Indicators.

The aim for the portal is to make this dataset available to the wider public through an online data portal that will allow for the data to be interrogated, filtered and viewed in several ways, to be exported in CSV format, and to be queried through an API.

Examples of online data portals that we wish to emulate in terms of functionality, design and user experience are the Corporate Tax Tracker, the Resource Governance Index and the Responsible Mining Index.

Examples of how to visualize the data

- Map with the total exposure of a country to all financial transactions. There should be drop-down menus or tabs that allow the user to choose the desired financial transaction (total/inward banking/inward trade/etc), to select the numeric variable (vulnerability/intensity/exposure) and to filter by year (2007-present).
- *Comparison tool:* Comparison of selected countries (the user should be able to select several countries, or some pre-filters such as region or income class):
    ◦ Stacked bar plot with the total exposure for each of the 8 flows, for the most recent year.
    ◦ Line plot with the temporal evolution of the total exposure for the selected countries.
- *Transactions tool*: Comparison of the eight economic transactions.
    ◦ Stacked bar plot with the top countries contributing to the worldwide exposure for each financial transaction.
    ◦ Line plot with the temporal evolution of the contribution of the financial flow to the worldwide exposure to IFF.
- *Country-profile tool* (activated when clicking on top of a country in the map or on individual countries in the other tools):
    ◦ Stacked bar plot with the top partner countries contributing to the exposure for each financial transaction.
    ◦ Stacked bar plot with the top partner countries where the selected country has the largest contribution, for each financial transaction.

◦ Line plot with the temporal evolution of the exposure to each financial transaction.

* For all plots, there should be a toggle button to choose between exposure, vulnerability and intensity
* All bar plots should have an option to select the year (default = most recent year)
* Ideally, for all plots there should be a toggle button that allows the user to change the table. The default table uses overall secrecy scores of the Financial Secrecy Index, but there will be a series of other tables using individual Key Financial Secrecy Indicators (KFSIs).

Basic structure of the website

- Home page: The front page should be simple, with a small description of the project, the interactive map, and links to the "About" section and the four elements of the website: the comparison tool, the transactions tools, the country-profiles and the data explorer.
- Static pages:
  ◦ "About" section, which contains details on methodology, contact information, etc.
  ◦ One page by country: Initially empty, but Tax Justice Network may update it in the future.
  ◦ One page by flow: Initially empty, but Tax Justice Network may update it in the future.
- Dynamic pages:
  ◦ The interactive visualizations indicated above, or similar ones.
  ◦ *Data explorer:* Allows to filter the data set by row (country, region, or selected countries), by columns (from a list of indicators), and by table (overall secrecy score and individual Key Financial Secrecy Indicators).

Deliverables

- Design and build an open data portal to enable the easy exploration and consumption of the dataset on Illicit Financial Flows. In particular, it needs to:
  o Visualize the data using a range of standard interactive charts (bar plots, maps), including the ones above or alternatives proposed by the consultant.
  o Allow users to explore the data by filtering using specific conditions, and support CSV (and possibly Excel) downloads
  o Support basic social media sharing of the figures generated.
  o Allow for simple updates of the portal, including updates of the static pages, and updates of the data including information on more recent years (but the same variables otherwise). Updating the data should automatically update the visualizations without any input by Tax Justice Network.
- Arrangement of the initial hosting of the portal and data (but to be transferable to the Tax Justice Network).
- API: Simple documentation of the API (see requirements section).
- Full source code including all developed libraries, released under GNU GPLv3 license.
- Support and maintenance: Develop an admin manual and provide technical assistance for up to 5 days during the six-month period after the portal goes live, including advise for Tax Justice Network on how to upload new material, and how to perform system maintenance and administration.

Requirements

- The portal should also:
  o Have a built-in API that communicates with the database, and is queried by the visualizations and the data explorer.
  o Provide an ability to search across data and metadata, including an advanced search to further filter and customize search options.

- o Incorporate a free website analytics tool, providing data around website, content, embeds, users, and API. The portal should incorporate Cookie Policy and be GDPR compliant.
  - o Provide an ability to update documents (e.g. data dictionaries, methodology notes, etc) in the about section.
  - o Would ideally be able to support multi-language content, i.e. the ability to add translated webpages and switch languages.
  - o Not depend on any proprietary software that incurs ongoing subscription or licencing fees.
  - o Use of consolidated technologies, with long-term support.
- Simplicity: The code should be as simple as possible, to allow TJN to re-use it in future projects.
- Admin manual: The admin manual should explain how to update the datasets and ideally provide a script to automatically do it. It should also detail the steps taken for deployment.
- Browser compatibility: At least Google Chrome, Microsoft Edge, Mozilla Firefox, and Safari.
- HTTPS security: The portal must be secured with a SSL certificate.
- Basic device compatibility: The visualizations should *not* be optimized for mobile devices, but the portal should be responsive. See for example the [Corporate Tax Tracker](#) or the [World Inequality Database](#).
- Affordable web and database hosting to reduce long-term costs.

Timings and budget

- Start date   23 September 2019
- Portal go-live date   1 January 2020
- Training of TJN staff and transfer of full code   15 January 2020

Our budget for this project is £13,000 including VAT, hosting for one year and other expenses. The proposal should include a detailed budget broken down by deliverable/requirement and showing day rates charged. This activity is being carried out within a framework of a project financed by GIZ, commissioned by the Government of the Federal Republic of Germany.

Skills and experience required

- At least two years' experience of designing and building open data portals or similar websites, ideally with non-profit and/or government organisations.
- Key staff should have at least five years' experience of relevant website design and development. In particular they should:
  - o Have a broad knowledge of current web development technologies, web programming languages and design tools, including use of modern HTML, CSS, Javascript and visualization libraries such as D3.
  - o Demonstrate the ability to create visually appealing designs.
  - o Be an expert in search engine optimization.
- All project staff should have fluent written and spoken English.

Instructions for submitting a proposal

Please submit a proposal, a portfolio of previous projects, budget and any relevant supporting documents, to will@taxjustice.net by 4 September 2019 at 23.59 UK time. The proposal should include the organisation's or consultant's track record and proposed deliverables. It should describe how the requirements outlined above will be met and whether there are any limits on scalability. The budget should include estimates (with a justification) of any necessary ongoing running costs (e.g. server hosting). For any questions relating to this tender, please contact Javier Garcia-Bernardo on javier@natixio.com or +31625643671.