Demanding open data in Serbia

*Role of think tanks and
research-based civil society organizations*

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0 | SUMMARY

Open Data progress in Serbia is currently limited both in terms of datasets and the number of government institutions which release their data. Moreover, while there have been research projects which explored the 'supply side' of open data in Serbia, the demand for open data has not been assessed in a comprehensive manner. Taking into account this lack of focus on demand for open data, this discussion paper is based on an exploratory research project investigating to what extent think tanks and research-based CSOs in Serbia are involved in demanding open data, and whether they are able to see the value of open data, as well as adequately utilize open datasets. This group of CSOs was chosen as the main research subject given the benefits these research focused CSOs could receive from an enriched data environment in the country. In terms of methodology, being exploratory in nature, this research accordingly relies mostly on qualitative methods, namely desk research, interviews, and stakeholder mapping. However, whenever it was possible, this research includes quantitative analysis of: existing open datasets in Serbia, attendance rates at open data events which are intended to indicate open data demand, as well as methodological trends among CSOs conducting research in Serbia.

Given that the paper found a very small number of civil society stakeholders who are actively engaged with the topic of open data, the paper aims to draw the attention of think tanks and other research-based CSOs, as well as the donor community, to the wide array of open data potentials. These potentials range from increasing government transparency, enabling better monitoring and evaluation of government performance, enhancing the 'data light' research environment in the country, improving and diversifying CSOs' research methodologies, to possibly increasing think tank legitimacy and advocacy efforts, as well as their sustainability. While the stakeholder mapping does reveal that the topic of open data has only a niche existence in Serbia, both within the civil society and the government sector, there are reasons to be optimistic about open data progress in Serbia. Namely, the influence of limited number of government and civil society actors who are currently involved in open data efforts in Serbia, and their collaboration until now, promises that open data efforts in Serbia will greatly intensify in the upcoming period. However, more awareness raising, enhancing the technical and analytical capacities of CSOs, as well as cross-sector collaboration, could be crucial for open data progress in both the long and short term.

Hence, based on findings obtained through this research, this discussion paper offers recommendations as to how think tanks and research-based CSOs can improve their demand for open data, knowledge and use of open datasets, as well as their methodologies and advocacy efforts. Additionally, recommendations are offered on how think tanks and other research-oriented CSOs can collaborate with the government on one hand, and academic institutions, the private sector, the media, and the wider tech community, on the other. The latter sectors are seen as possible partners in demanding and utilizing open data. Additionally, throughout the paper, the donor community is assessed as one of the most relevant actors influencing the work of civil society in Serbia.

1 | INTRODUCTION: OPEN DATA AND CIVIL SOCIETY IN SERBIA

Open data is data that can be freely used, re-used and redistributed by anyone -
subject only, at most, to the requirement to attribute and share-alike.[1]

Whether it is data on air pollution, required primary and secondary school textbooks, or budget spending, government open data can contribute to the work of multiple sectors within a society, beginning, of course, with the benefits for the governments which open their data. On one hand, the relevance of open data has been mostly regarded through the economic or financial benefits it brings to both governments and the private sector.[2] On the other hand, open data is also commonly considered as being a benchmark for open government, indicating a certain level of transparency and ease of access to information.[3] However, the potential effect of open data on societies goes far beyond economic gains and open government goals. In the context of that potential, this research attempts to tease out the specific potential of open data for enhancing the quality of research and advocacy efforts, as well as the visibility and legitimacy of think tanks and research-based civil society organizations (CSOs) in Serbia.[4]

Why is the involvement of these particular CSOs even relevant in the context of open data? Think tanks and other CSOs which conduct research should have a continual need for quality data in order to enhance their evidence-based advocacy efforts, improve the monitoring and evaluation of government performance, and gain legitimacy as objective sources of information on various policy areas and issues. However, Serbia has been characterized as a 'data light' environment and, accordingly, think tanks and CSOs with extensive data needs actually have little access to sustained data sources. Hence, the primary objective of this discussion paper is to demonstrate the importance of think tanks and other CSOs engaged in research in demanding and utilizing open data, especially in the early stage of opening data, which is the case in Serbia. This paper also covers the more general topic of open data demand by civil society, which is a relevant and under-researched issue in Serbia, as well as in the region, given that most research on the topic of open data has previously focused on the 'supply side'. In accordance, the research first focuses on the demand-side of open data, and later on the potential utility of these datasets for CSOs engaging in research, as well as other sectors which can benefit from open data.

The demand for open data, which can be created by civil society actors (as well as the private sector, academic institutions, international organizations, etc.), may be just as crucial as the government's willingness and efforts to open its datasets. However, apart from just demanding the opening of data, think tanks and other CSOs

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1   Open Data Handbook, "Guide: What is Open Data?", accessed June 1, 2016, http://opendatahandbook.org/guide/en/what-is-open-data/.
2   Andrew Stott, *Open Data for Economic Growth*, The World Bank, June 25, 2014, accessed May 29, 2015,
    http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf.
3   For example, the Open Government Partnership, a multilateral initiative which gathers 70 countries, recognized the political relevance of open data for governance by creating an Open Data Working Group. As they explain, they view open data as an opportunity for supporting transparency reforms and improving the disclosure of information, as well as the public's access to that information. See more at: http://www.opengovpartnership.org/groups/opendata.
4   There are variations in how civil society organizations are defined. For one, on the EU level, CSOs have a much wider definition, encompassing labour-market players, NGOs, community-based organizations, etc. For a more detailed overview of this definition see: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2002:0704:FIN:EN:PDF#_Toc46744741. However, this paper utilizes the definition commonly accepted in Serbia which equates CSOs and NGOs.

need to know how they can handle and utilize open datasets. As a recent UNDP's report stated: "The value of data is in its use."[5] The same report, namely *Open Data Readiness Assessment for the Republic of Serbia,* assessed the demand for open data in Serbia as *yellow*[6] and stated that "broader awareness raising outside already capable CSO's may be needed."[7] Given Serbia's vibrant and dynamic civil society, it is worth asking why the demand for open data is not higher and why more CSOs are not engaged in this issue, as well as how this demand situation can be changed, especially in respect to think tanks and other research-oriented CSOs.

Therefore, the specific objectives of this exploratory research project are to investigate to what extent think tanks and other CSOs conducting research are able to adequately utilize open data in Serbia, what benefits they could receive from it, and offer recommendations as to how these research-focused organizations can improve their knowledge and use of open data, as well as their advocacy efforts. Additionally, the research will also explore how think tanks and other research-oriented CSOs can collaborate with academic institutions, the private sector, the media, and the wider tech community, as possible partners in demanding and utilizing open data. The final objective of this discussion paper is to draw the attention of think tanks and other research-based CSOs to the potentials of open data, which is a relevant and demanding task given that the topic of open data is still breaking ground in Serbia.

1.1 | Brief Introduction to Open Data in Serbia

Work on open data in Serbia has mostly focused on the government's provision of open data, reshaping the Serbian legal framework to include open data, or the possibilities that open data can bring to the tech community involved in website or mobile app development. As global rankings indicate, Serbia has a long path in front of it in terms of producing meaningful open data and propagating its use. More precisely, Serbia is not even included in the two most prominent open data indices, namely, the Open Data Barometer[8] and the Open Data Index,[9] and official and meaningful efforts of opening datasets by the government institutions began only in late 2015-early 2016. However, there have been several important developments and related processes contributing to the open data efforts in Serbia. For example, the Open Data Working Group, which gathers both representatives of the government and civil society, has been working on how to include open data in the legal framework of Serbia, which will most likely happen through open data's incorporation in the Law on Free Access to Information of Public Importance.[10] In addition, the tech community has been involved in organizing a few open data-focused events, most notably the two open data hackathons.[11] These were intended to utilize recently opened government datasets, as well as to demonstrate the potentials of open data.

5   Anton Ziljstra, *Open Data Readiness Assessment for the Republic of Serbia*, UNDP, 2015. Accessed December 29, 2015, http://www.rs.undp.org/content/dam/serbia/Publications%20and%20reports/English/UNDP_SRB_ODRA%20ENG%20web.pdf.

6   Yellow indicated that "evidence of readiness is less clear." Ibid., 6.

7   Ibid., 22.

8   However, interviews with relevant stakeholders have indicated that Serbia could soon be included in this ranking. See more on the Open Data Barometer: http://opendatabarometer.org/3rdEdition/report/#readiness (accessed June 2, 2016).

9   It is relevant to indicate that Serbia was previously included in the ranking, but that all related information was taken down for reasons unknown to the author. See more on the Open Data Index: http://index.okfn.org/place/serbia/.

10 The interviewee provides legal expertise for the Open Data Working Group. Interviewed by author, Belgrade, June 21, 2016.

11 The first one was organized by Start It and UNDP in December 2015, and the other by the student association FONIS in May 2016.

Along with these continual efforts, there are additional projects and endeavors related to the process of opening data. For one, the Educational Centre has cooperated with the Commissioner for Information of Public Importance and Personal Data Protection to create the first comprehensive open data portal covering the work of a Serbian public institution.[12] The Ministry of Education, Science and Technological Development has also recognized both the potential of and the need for open data, demonstrated by the opening of dozens of datasets, albeit with different levels of utility. In addition, there have been statements from higher government representatives in support of open data. For example, in May 2016, the Minister of Education at the time, Srđan Verbić, who had been a vocal supporter of open data, stated:

> *Data opening is quite an odd experience. You celebrate each dataset as an accomplishment of a small master piece. Yet, it is frustrating if you are also a decision maker. There are two main reasons for this frustration. The first is when you realize that neat, good-looking, and newly published tables contain mostly irrelevant and unreliable data. It reveals too little. I wish it was different. The second is when you realize how big the resistance to data opening is among many of your associates and employees. Because it reveals too much, of course.[13]*

Apart from these domestic initiatives, it is important to keep in mind the context in which open data is developing in Serbia, in particular how it compares to continental or regional-level trends. In relation to open data maturity, EU Member States can be placed on varying levels, i.e. as beginners, followers, or trend setters.[14] At one end, there is the United Kingdom - a global leader in all open data rankings[15] - that is obviously placed on the trend setter spectrum of open data maturity within the EU. At the other end, there are Malta and the Czech Republic, which are ranked as beginners in terms of open data maturity. In this context, given the definition of a beginner country in open data within the EU context,[16] it would even be difficult to place Serbia within that category, let alone any other, considering that it does not yet have a functioning centralized open data portal. Nevertheless, the development of the Commissioner's and the Ministry of Education's portals need to be taken into consideration as examples of good open data practice in Serbia, possibly reserving the country a place in the category of an open data 'beginner'.

On the regional level, however, it is much harder to compare open data maturity and progress, given that no global or continental index has covered the Balkan or even Western Balkan region as a whole. Nonetheless, a simple search for open data portals reveals that Serbia is a negative outlier in comparison to its neighbors. Namely, irrelevant of EU membership, most neighboring countries, such as Bosnia and Hezegovina,[17] Kosovo*,[18]

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12 The Commissioner's portal can be accessed here (in Serbian): http://data.poverenik.rs/sl/otvoreni-podaci (accessed June 15, 2015). This project was financed by USAID's Judicial Reform and Government Accountability Project.

13 Srđan Verbić, "Spring cleaning in a ministry: Use #opendata", May 21, 2016, accessed June 21, 2016, https://www.linkedin.com/pulse/spring-cleaning-ministry-use-opendata-srdjan-verbi%C4%87.

14 Tariq Khokhar, "European countries making clear progress with Open Data," The Data Blog, World Bank, March 30, 2016, accessed April 28, 2016, http://blogs.worldbank.org/opendata/european-countries-making-clear-progress-open-data.

15 UK is ranked 1st according to the Open Data Barometer (http://opendatabarometer.org/), however, the Open Data Index places it 2nd, after Taiwan (http://index.okfn.org/place/).

16 The definition of a beginner country in open data context within the EU is: "The initial steps have been made, but countries still struggle with basics around availability and accessibility. Portal functionalities remain limited and there is a limited coverage in terms of data sets."

17 See Bosnia and Herzegovina's open data portal at: http://opendata.ba/ (accessed July 10, 2016).

18 See Kosovo's open data portal at: http://opendatakosovo.org/ (accessed July 10, 2016).

Albania,[19] Romania,[20] or Croatia,[21] have developed open data portals and, in comparison with Serbia, these portals feature more content, numerous datasets, and no copy-pasted content.[22] While a portal as a centralized place for open datasets of a government is a relevant step in open data maturity, it should be reemphasized that different institutions in Serbia have opened their datasets and that these individual efforts contribute to open data progress in Serbia, irrespective of the existence of a functional official open data portal. However, what can be taken as a conclusion of these arguments is both that Serbia has to place a lot of effort into achieving progress in terms of open data maturity, as well as that individual government institutions and relevant civil society stakeholders have already begun contributing to Serbia's progress through multiple collaborative efforts, either through the Working Group or through 'individual' civil society projects. These conclusions allow for a more detailed investigation of civil society demand for open data, which is the focus of this paper.

1.2 | Research Methodology and Scope of Discussion

The research conducted for this paper is mostly based on qualitative methods, more specifically, desk research, stakeholder mapping, and interviews with relevant stakeholders. However, these research efforts were enriched with quantitative analysis, more precisely, descriptive statistics, wherever it was possible to do so. Qualitative methods were chosen as they are the most suitable for this research topic, due to the fact that the issue of open data is still the inception phase in Serbia and there are not enough think tanks, researchers, or civil society organizations actively engaging with this topic in order to have an adequate sample for conducting quantitative research. Hence, this is primarily an exploratory research effort for which qualitative methods are the most fruitful and adequate approach. Desk research was utilized to compile and analyze existing primary and secondary sources on the topic of open data and think tanks, as well as any relevant reports and research done in this field in Serbia, or on the continental and regional level. Stakeholder mapping was used in order to assess the commitment levels of different actors and sectors engaged in open data efforts in Serbia. Additionally, stakeholder mapping included limited quantitative data, namely, attendance rates of different government, civil society, private sector, or media actors, at a few relevant open data events. Quantitative analysis was also used to assess the existing methodologies of relevant think tanks and research-based CSOs. Lastly, the interviews targeted relevant researchers who have conducted or attempted to conduct research using open data in Serbia, or those who would most benefit from it, in order to gain insight into the current status of open data efforts and their potentials for these civil society researchers. Additionally, the interviews included open data experts, donor community representatives, and other civil society representatives who have been identified as relevant stakeholders. Overall, the interview design was semi-structured, and 15 formal in-depth interviews and 6 shorter and informal interviews were conducted for the purpose of this research.

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19 See Albania's open data portal at: http://open.data.al/ (accessed July 10, 2016).
20 See Romania's open data portal at: http://data.gov.ro/ (accessed July 10, 2016).
21 See Croatia's open data portal at: http://www.odatastore.com/portfolio/open-data-gov-hr/ (accessed July 10, 2016).
22 The website 'Open Data Portal', run by the Directorate for eGovernment, presently contains no datasets and limited textual information. Additionally, it is important to mention that several of their pages, such as the Discover Open Data as a Citizen page, currently contain only information in French copied directly from the Open Data Portal of the French government. For example, the French 'Discover Open Data As a Citizen' page can be found at: http://www.data.gouv.fr/fr/faq/citizen/ (accessed July 18, 2016), while the Serbian 'Discover Open Data As a Citizen' page can be found at http://opengo.rs/sr/faq/citizen/ (accessed July 18, 2016).

However, this methodology does come with its limitations. Namely, while it is heavily focused on analyzing open data efforts and opinions of CSOs engaged in research, the views of government institutions, the donor community, the media, the private sector, the tech community, and academic institutions, are based only on a couple of interviews for each category. Even though researching think tanks and research-based CSOs is, in fact, the primary focus of this paper, interviewing additional stakeholders from other sectors would have provided a fuller picture of open data progress in Serbia and does represent a notable limitation. Another relevant limitation is the fact that there is no formal assessment on open data knowledge and data literacy among civil society representatives. This research endeavor could have ameliorated this situation through a questionnaire, however, due to several constraints related to time and research resources, as well as the format of this paper, assessing open data knowledge and data literacy among civil society representatives represents a task for another research project or researcher. Keeping in mind the aforementioned limitations, the findings presented in following chapters are fully based on the methodology outlined above.

The first chapter focuses on open data demand and progress which can be attributed to civil society, with a particular focus on think tanks and CSOs engaging in research. The second chapter addresses the potentials of open data for these research-based CSOs and the role of the donor community. The following chapter introduces a wider conceptualization of open data and assesses the potentials of open data production by think tanks and other CSOs. This chapter also focuses on how open data production could be enhanced through cross-sector collaboration. Lastly, this paper offers key conclusions and recommendations for think tanks and other CSOs engaging in research in Serbia. Additionally, a set of recommendations provided at the end is intended for the donor community, which is regarded as the stakeholder with the greatest influence over the work of civil society in Serbia. Overall, the recommendations are intended to contribute to increased engagement of civil society with open data and their demand for it, the establishment of cross-sector partnerships, transformation of the 'data light' environment through increased production of open datasets, improvement of research methodologies, data analysis, and evidence-based advocacy efforts of civil society organizations, as well as enhanced civil society transparency and legitimacy.

2 | ROLE OF CIVIL SOCIETY ORGANIZATIONS IN OPEN DATA PROGRESS

Civil society in Serbia has been one of the catalyzers of change in the country, even when its limitations are taken into account, namely, the lack of funding, especially from the state, and unbalanced representation on the local level.[23] Hence, civil society actors have been key in demanding certain changes from government institutions. The concept of 'demand' is of particular relevance in this regard, because major changes in Serbia and the 'supply' of certain reforms has usually come after these changes were 'demanded' either by the EU, Serbia's civil society organizations, or other relevant actors. Hence, the following sections attempt to assess the current level of open data demand coming from the civil society. The first section will assess this demand by attempting to measure CSO interest in open data, the second section will present data gathered through stakeholder mapping, while the third will address the existing platforms which allow civil society to cooperate with the government and channel its demand for open data. The final section of this chapter will address the existing open data niche within civil society organizations in Serbia.

2.1 | Measuring CSO Interest in Open Data

Despite the clear relevance of demand for open data, it was a rather challenging endeavor to assess the demand for something which does not yet exist in a systematic, cohesive, and comprehensive way in Serbia. A more unconventional approach had to be adopted to address this situation, hence, this section analyses open data interest through attendance rates at relevant multi-stakeholder events. Four events relevant for open data, which occurred within the past year, were chosen and their attendees analyzed by their respective sectors. These four specific events were singled out because, apart from their open data focus, they included a wider array of stakeholders and each of them was primarily organised by a different stakeholder.[24] While the Open Data Hackathon, the opening of the Commissioner Information of Public Importance and Personal Data Protection's data, and the public consultations regarding the new Open Government Partnership (OGP) Action Plan were analyzed only in reference to the CSO attendance, the conference "Open Data, Open Possibilities", organised by the UNDP, was analyzed in a more comprehensive manner. More specifically, the attendance at the conference was analyzed by looking at the list of invited participants and crosschecking the actual attendance of different stakeholders, which allowed for a measurement of the attendance rate of different sectors.[25]

The first analyzed event was the Open Data Hackathon, organised by Start It in November 2016. The organizers called on programmers, designers, and activists to apply and use the opportunity to create applications based on data opened by the Ministry of the Interior, the Medicines and Medical Devices Agency of Serbia, the Environmental Protection Agency, the Public Procurement Office, and the Ministry of Education, Science

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23 European Economic and Social Committee, "The role of civil society in EU-Serbia relations," REX/381, July 10, 2013, accessed June 1, 2016, http://www.eesc.europa.eu/?i=portal.en.rex-opinions.28355, 7.

24 While the Open Data Hackathon was funded by the UNDP, its primary organizer was a CSO, Start It. The event on the Commissioner Information of Public Importance and Personal Data Protection's open data was organised by the Commissioner's office and in cooperation with a CSO, Educational Centre. The public consultation regarding the new Open Government Partnership Action Plan was organised by the Ministry of Public Administration and Local Self-Government. Lastly, the conference "Open Data, Open Possibilities" was organised by UNDP.

25 The list of invited participants and attendees was anonymized and kindly provided by one of the UNDP organizers of the conference "Open Data, Open Possibilities." The list divided the attendees into 6 relevant groups: academia, government, CSO, business, international organization, and media. There was an additional group dedicated to UN organisations, but this one was merged with the category of international organisations due to the international characterization of both categories.

and Technological Development. The call directed at activists elaborated: "This Hackathon is your opportunity to give your activities and ideas a mobile or a web-based application which uses data recently opened by government institutions (such as educational, public procurement, and environmental data). All activists and representatives of civil society organisations are invited to apply."[26] As the interview with one of the Hackathon organizers revealed,[27] while programmers and designers applied in considerable numbers, activist and related CSO applications came in very low numbers. Namely, while over 40 programmers applied for the Hackathon, less than 10 applications came from activists and CSOs. As one of the organizers explained, they had to reach out to UNDP and use their contacts to attract more participants from CSOs. However, there were only three CSO representatives present at the Hackathon in the end.

On February 19, the Ministry of Public Administration and Local Self-Government, which is in charge of Serbia's commitment to the OGP, organised a public consultation regarding the new two-year Action Plan. The consultation was divided into six working groups, depending on the topic of interest related to open governance, with the aim of each group producing drafts of potential OGP commitments which could be included in the new Action Plan. One of these six groups was focused solely on the issue of open data. Apart from the discussion moderator, who was a representative of the Directorate for eGovernment, there were representatives of six CSOs present at the open data discussion, as well as one UNDP representative. Similarly, on February 29, 2016, at the opening of the Commissioner for Information of Public Importance and Personal Data Protection's data, which was the first time that a government institution opened data in such an extensive manner, only six CSOs were in attendance. It is relevant to mention that, with two exceptions, the CSOs whose representatives attended these two events were the same. In the interviews, a few interviewees indicated their frustration at the lack of more extensive CSO involvement.[28] In this regard, the attendance at the UNDP conference in December 2015 offers deeper insights given that this was the only large-scale event organised on the topic of open data in Serbia.

Attendance rates for the "Open Data, Open Possibilities" conference are presented in the *Table 1*.[29] The attendance rate was the highest within the academic sector, namely 60%, followed by the government sector at 46%, and closely followed by the CSO sector at 43%. The business sector had an attendance rate of 27.6% and international organisations 21%, while the media had the lowest level of attendance, namely, 9%. The attendance rate of CSOs is unexpectedly lower than that of the academia and the government. However, if any conclusions are to be made from this variance in attendance levels, the numbers of actual representatives from each sector need to be taken into account. More precisely, while 11 media representatives were invited to the conference, this number for government representatives is 85. Related data is presented below in *Chart 1*. It reveals that the conference was most attended, in terms of sheer numbers, by government representatives, at 44% of attendees, followed by CSOs at 25%, and academic representatives at 13%. The business community representatives accounted for 9% of the conference attendees, and international organisations' representatives for 8%, while the media accounted for only 1%.

26 Start It, "Open Data Hackathon - Create technical solutions for using first open datasets in Serbia," accessed April 14, 2016, http://startit.rs/open-data-hakaton-kreirajte-tehnicka-resenja-za-upotrebu-prvih-javno-dostupnih-podataka-u-srbiji/.

27 Interviewed by author, Belgrade, April 27, 2016.

28 Interviewed by author, Belgrade, April 27, 2016.

29 It is important to keep in mind the limitation of the following results, namely, even though the calls for these events were made public, the attendance rates are influenced by the existing networks of the organizers who were invited via e-mail as well.

Table 1: Open data conference attendance

Sector	Attendance rate (%)
Academia	60
Government	46
CSO	43
Business	27.6
International org.	21
Media	9

Chart 1: Conference attendance by sector

Media (1%)
International org. (8%)
Business (9%)
Academia (13%)
CSO (25%)
Government (44%)

While the above-mentioned data does reveal an existing interest of CSOs in the topic of open data, this interest appears to be modest, limited to a group of CSOs, and scattered in accordance with the type of event. In fact, interviews with relevant CSO representatives provided important insights necessary for explaining the limits of demand for open data by CSOs and their low interest in the topic. Most interviewees indicated that the limited knowledge of the topic and the related lack of technical capabilities for handling open data explain the low demand. One interviewee indicated that the donor community can also partially explain the lack of interest in open data, given that most CSOs are funded by big donors such as UNDP, USAID, and Open Society Foundations.[30] He expressed his concern that, given that there are no calls for project proposals directly related to open data, if he wanted include open data into a project proposal, he would not for fear of it not being understood or its relevance not being appreciated by the donor. The importance of the donor community in affecting what CSOs demand was also corroborated by an interview with a UNDP representative, who stated that as soon as UNDP became more engaged with the topic of open data, they received calls from CSO representatives who had no experience in the topic, but were interested whether grants are available for open data projects.[31] This example best demonstrates the possibility of donors to entice CSO interest in certain topics or to activate an interest which was marginalized because of a lack of financial resources (i.e. project funding made available by donors).

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30   Interviewed by author, Belgrade, June 10, 2016.
31   Interviewed by author, Belgrade, June 21, 2016.

Overall, the lack of open data knowledge, low technical capacities, and the needs of the donor community appeared as the most relevant factors in explaining CSOs' demand and interest in the topic. However, most interviewees regarded this low level of demand for open data as 'normal' given that the topic is still quite new in Serbia, "even though the same cannot be said on the global level" as one interviewee emphasized.[32] Hence, the slow pace with which the civil society in Serbia updates their fields of interest and advocacy efforts was the leitmotif of a few interview discussions. Nevertheless, a former CSO representative who now works on open data for the Ministry of Education, Science and Technological Development, stated that the interest and demand for open data expressed by CSOs in Serbia is actually substantial when compared to the interest expressed by the media or the private sector.[33] From these qualitative insights and from the varying levels of attendance at open data events, it becomes clear that a stakeholder analysis is necessary to comprehensively assess the involvement in and demand for open data in Serbia.

2.2 | Stakeholder Mapping: Who Demands Open Data?

In order to approach the existing stakeholders in a systematic manner and assess their interest and influence in the area of open data, Burgoyne's model for stakeholder analysis was adopted.[34] In his model, Burgoyne allows for the level of influence of each stakeholder to be compared to the attitude of the stakeholder towards the intended change, whereby the stakeholder's attitude can be classified as non-committed, on the fence, or committed. While the level of commitment was analyzed on the basis of attending open data events or directly engaging in open data projects,[35] the level of influence appeared as an immediate issue given that the stakeholders came from different sectors and, hence, could have more influence in their own sector, but possibly less influence in others. Additionally, there were no objective indicators which could allow a reliable comparison in influence between a government institution and a CSO, for example. In line with these two issues, Burgoyne's model was adjusted so that the levels of influence (i.e. high, moderate, and low) of each stakeholder was looked at within their own sectors of influence (e.g. government, civil society).[36]

Stakeholder mapping reveals that, at the moment, the engagement of government stakeholders could be stronger than that of CSOs in terms of the sheer number of institutions involved. Nonetheless, while the number of committed CSOs is relatively small, these CSOs are all rated as either highly or moderately influential (e.g. Center for Research, Transparency and Accountability, SHARE Foundation, Start It, etc.). On the other hand, concerning the government institutions which have demonstrated an interest in open data, there is much more variance in their level of influence (i.e. some of these stakeholders are larger ministries, such as the Ministry

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32   Interviewed by author, Belgrade, June 13, 2016.

33   Ibid.

34   J.G. Burgoyne, "Stakeholder analysis," in C. Cassel and G. Symon eds., *Qualitative Methods in Organisational and Occupational Psychology: A Practical Guide,* London (1994): Sage.

35   Commitment levels were analyzed as follows: *No commitment* - Only one or no open data events were attended. No statements were made regarding open data by a relevant stakeholder representative. *On the fence* - Two or more events were attended. Statements were made regarding open data by a relevant stakeholder representative. No known engagement regarding open projects has been undertaken. *Committed* - Statements were made regarding open data by a relevant stakeholder representative and the organization has directly been involved in an open data project.

36   Of course, the researcher recognizes that stakeholders might be influential outside of their respective sector of functioning, however, it is not possible to measure this influence in the current context, hence the stakeholder categories will remain based on the kind of sector rather than cross-sectoral influence which would be used in the traditional Burgoyne's model.

of Education, while others are smaller agencies, such as the Medicines and Medical Devices Agency). As far as the donor community is concerned, even though there are only two donors active in the open data efforts, namely UNDP and USAID, both of these are assessed as highly influential donors.[37]

Overall, the number of committed stakeholders within the government, civil society, and the donor community is so limited at the present moment that any conclusions need to be nuanced. Therefore, the utility of the stakeholder mapping might lie more in the possibility of identifying potential connections between different committed stakeholders, as well as potential partnerships between committed stakeholders and those who are 'on the fence', rather than identifying trends in open data commitment. As Jhala and Christian noted: "Stakeholder analysis is best seen as a continuing process, which should engage different groups, as issues, activities, and agendas evolve."[38] Therefore, rather than being 'set in stone', the stakeholder landscape is in an ongoing, sometimes rapid, process of development and the situation presented in this paper addresses only the slice of time when the research was conducted, namely the period between December 2015 to June 2016. Even in this small time range, the research noted changes in the level of interest and influence of certain actors. For example, while the Commissioner explained how his interest in open data developed over the course of a few years,[39] a legal expert within the Working Group indicated that her interest and work in open data began and developed over the course of a few months.[40]

2.3 | Platforms for Collaboration: How Civil Society and Government Talk Open Data?

In Serbia, the relationship between the government and civil society has been historically tumultuous,[41] and there is still a palpable rift between the two groups of stakeholders. Accordingly, the open data efforts in Serbia could be affected by this rift and related issues in communication and cooperation between government and civil society. For example, following the Open Data Hackathon, the interviewed representative of Start It, the CSO which was in charge of organizing the event, stated that relevant government stakeholders expressed negative opinions regarding the engagement of CSO representatives and other Hackathon participants.[42] Namely, they voiced complaints that some applications were unfinished or disregarded quickly after the event took place. On the other hand, in the interviews, Hackathon participants complained that the data government institutions provided for the Hackathon was low in its level of utility, incomplete, and not updated.[43] However, despite these issues, there are existing platforms through which civil society organisations and the government are currently cooperating on the topic of open data. Each of the existing platforms will be addressed in the following paragraphs, with the aim of identifying their strengths and weaknesses in terms of providing a space for CSOs and government institutions to talk and act on open data issues.

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37 It is important to mention that UNDP has been more active on the topic of open data, while USAID has so far funded only the opening of the Commissioner's data.

38 Ninad Jhala and Arpita Christian, "Stakeholder analysis - Developing Theory from Field", February 2012, accessed March 15, 2016, https://www.researchgate.net/publication/221943153_Stakeholder_Analysis_-_Theory_from_Field, 3.

39 Interviewed by author, Belgrade, June 20, 2016.

40 Interviewed by author, Belgrade, June 21, 2016.

41 Thomas Emmert and Charles Ingrao, *Conflict in Southeastern Europe at the End of the Twentieth Century* (Abingdon: Routledge, 2013), 201.

42 Interviewed by author, Belgrade, April 27, 2016.

43 Interviewed by author, Belgrade, May 19, 2016.

Open Data Working Group

The Open Data Working Group was established this year and is constantly expanding to include new members from both the government institutions, as well as the civil society sector. One of the interviewees, who is part of the Working Group as a representative of the Ministry of Education, Science and Technological Development, indicated his satisfaction with the functioning of the Group and the quality of discussions.[44] Similarly, another interviewee, who is engaged as a legal expert and is not directly a representative of either the government or a CSO, indicated that the discussions so far have been constructive and that there were no noticeable tensions between different stakeholders.[45] However, she also indicated that most of the people who are a part of the Working Group are 'open data aficionados' and that tensions could appear if and when the Working Group grows to involve government institutions and their representatives who may not share the same level of interest in open data. She gave the example of the Business Registers Agency, which currently gains profit for making select datasets available to paying customers, and for whom open data as a wider government policy would be disadvantageous. All in all, current insights on the functioning of the Working Group, which were gained through the interviews, indicate that collaboration has so far been smooth and constructive. This presents the Working Group as one of the most stable platforms for government and civil society to discuss and work together towards open data progress in Serbia.

Project collaboration

The case study of the project led by the Educational Centre best reveals the potential benefits of project collaboration for both CSOs and governments in terms of open data, as well as the limitations of this type of collaboration. The primary goal of the project led by this CSO was to open the data of the Commissioner for Information of Public Importance and Personal Data Protection and the Anti-Corruption Agency. While they had the positive feedback from both institutions at first, the Anti-Corruption Agency pulled out at the last moment, after the project contract had already been drafted.[46] However, the project did lead to a successful opening of the Commissioner's data and the creation of the first government open data portal, which includes not only updated and complete datasets, but also dataset descriptions and data visualizations.[47] In his interview, the Commissioner indicated that he viewed the opening of the data as more symbolic, rather than being of extensive use to researchers and wider civil society, and that he merely hoped that a strong case was made for open data as a tool for transparency.[48] However, the currently limited engagement of the donor community is a constraint for project collaboration to become a relevant platform for the government and CSOs, an issue which will be further developed in the following chapter. For project collaboration to work as a platform, further engagement of the donor community is necessary on a few levels, namely, not only in terms of creating calls for project proposals on open data or related topics, but also in showing interest in the topic and understanding of its relevance. While the former provides direct funding for open data endeavors by CSOs and possibly in cooperation with government institutions, the latter could serve as a 'green light' from the donor community to the CSOs to demand and use open data by incorporating it into their project proposals.

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44   Interviewed by author, Belgrade, June 13, 2016.
45   Interviewed by author, Belgrade, June 21, 2016.
46   Interviewed by author, Belgrade, April 22, 2016.
47   See more at: http://data.poverenik.rs/sl/.
48   Interviewed by author, Belgrade, June 20, 2016.

Open Data Hackathons

Albeit this may appear as an unconventional platform in the context of Serbia, hackathons can act as a quick and effective demonstration of the importance and value of open data, both for the government and civil society representatives involved. The Open Data Hackathon organised by UNDP and Start It in November 2015 is a good example of the potential of hackathons as a collaborative platform. Firstly, the presence of front-end and back-end developers, as well as designers, acts as a buffer for any lack of technical knowledge or capacities. Secondly, the web or mobile-based applications produced during the 48 hours of a hackathon provide a palpable result for CSOs that they can use in their research, monitoring, or advocacy efforts. In addition, these results can also effectively demonstrate to the government what the actual value of their data is and how it can contribute to wider society just by opening it. However, conflicts between these two sets of actors - the government and CSOs - can occur if both sides do not put extensive efforts into the quality of the data which is used and the success of the applications that use it.

Open Government Partnership

Open Government Partnership (OGP) is a multilateral initiative which currently encompasses 70 countries with the aim of securing government commitments intended to empower citizens, promote transparency, fight corruption, and harness new technologies to strengthen governance.[49] The initiative publishes data gathered from the 70 countries in open data format and encourages open data as a tool which can contribute to each of the four broader aims identified above. OGP carries relevance for open data efforts because each participating country produces two-year action plans which include concrete government commitments. In the context of Serbia,[50] its currently drafted second action plan has been divided into six policy areas, one of which is open data. Additionally, the process of making the action plans requires the collaboration of and consultations with civil society organizations. This means that OGP, as an open data collaboration platform, holds great potential to bring government and civil society actors together and provide concrete results of this collaboration through OGP action plans and the related implementation of commitments.

2.4 | Open Data Niche in CSOs and Limited Think Tank Involvement

While the stakeholder mapping and attendance rates indicated a limited involvement of CSOs, they also revealed an existence of an open data niche among CSOs. Namely, the same group of CSOs seems to appear at each of the analyzed open data events. What is more relevant to the focus of this paper is that less than a half of this limited group is comprised of think tanks and research-based CSOs. As stated in the introductory chapter, think tank and research-based CSOs' involvement in open data initiatives and their demand for open data is particularly relevant for the overall open data progress. Put simply, while CSOs which are more engaged in advocacy or monitoring the government's transparency might be interested in demanding that the government open its data, think tanks and research-based CSOs might be more apt at researching the data and providing policy insights for the government and other CSOs. This completes the feedback loop between the process of government opening its data and receiving valuable analysis and inputs without having to invest its limited funds into analyzing the data on its own. Reducing costs in this way has been one of the

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49   See more on OGP at: http://www.opengovpartnership.org/sites/default/files/attachments/OGP_Booklet_digital.pdf.
50   Serbia's first action plan was drafted in 2014. See more at; http://www.opengovpartnership.org/country/serbia.

strongest arguments for governments to open their data.[51] However, this opens up an issue that is wider than open data demand, namely, open data management and use.

Apart from just demanding the opening of data, think tanks and other CSOs need to know how they can handle and utilize open datasets. The current CSO open data niche does have capacity to utilize open data, however, this niche includes a fairly limited number of individuals able to analyze open data in the context of providing relevant policy recommendations or effectively monitoring government performance. Additionally, it is relevant to mention that civil society researchers interviewed for this paper have complained about the utility of the existing government open datasets. Hence, unless the usability of the existing government data improves and the CSO efforts at providing feedback, demanding more data and better data, as well as using the currently open datasets increase, it could be difficult to demonstrate the relevance and utility of open data to a wider civil society circle. Thus, it be can stated that the intensity of open data demand by CSOs is a direct prerequisite for the improvement, in terms of quality and quantity, of the data made available by the government. Limited open data demand by CSOs is thus inseparable from the lack of open data made available by the government, as well as the related lack of good examples of open data usage in Serbia overall.

To sum up, the fact that there is a fairly small open data niche is not surprising given the technical nature of open data, the lack of a legal framework addressing open data in Serbia, and the novelty of the concept on the policy landscape in Serbia. Hence, a lot of CSOs which could benefit from open data may not be able to use it currently without first extensively ameliorating their technical capacities and methodological skill set. Additionally, many are not even informed about the potentials of open data and how it can fit the policy and legal framework in Serbia. However, the nature of open data is such that it can be demanded, utilized, and advocated for by all CSOs, irrespective of the issues they cover. This especially holds true for think tanks and research-based CSOs, which should have a continued need for good data and can provide relevant evidence-based policy recommendations to the government. The following section of the paper will deal with the potentials of open data for Serbian think tanks and research-based CSOs in particular.

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51   See more at: http://opendatahandbook.org/guide/en/why-open-data/.

3 | POTENTIAL INVOLVEMENT OF THINK TANKS AND RESEARCH-BASED CSOS

While the previous chapter addressed the current state of interest and commitment with regards to open data and civil society in Serbia, it is necessary to address the reasons why CSOs should demand open data, concerning their current needs and involvement in research activities. More specifically, it is important to address open data as a tool for CSOs, rather than solely as a policy instrument aimed at enhancing transparency and access to information. Hence, the following sections deal with the limitations of research methodologies applied by think tanks and research-based CSOs in Serbia, and the potential of open data to diversify the current research approaches, increase the usage of quantitative methods, and enhance the data environment in general. The second section additionally addresses open data potentials with regards to CSO advocacy efforts and their reputation within the wider public in Serbia. Lastly, bearing in mind the significant role of the donors in directing and shaping CSO activities, the third section addresses the role of the donor community with respect to existing open data challenges and opportunities.

3.1 | Open Data as a Research Tool

The Western Balkan region has been characterized as 'data light',[52] although according to some researchers and in respect to certain areas of policy research, this characterization could be viewed as a euphemism. Put simply, for policy researchers and other CSO researchers in Serbia, there is very little data 'out there', so analysis and research might often involve 'starting from scratch'. Interviews with relevant CSO researchers confirmed the difficulties of operating in a 'data light' research environment. In this regard, several researchers interviewed for this paper pointed out the relevance of the Law on Free Access to Information of Public Importance, which is the primary tool for researchers to gain data and information on public institutions' activities and government's performance.

However, despite the Law receiving the highest global ranking in comparison to related legislation across the world,[53] there are still major issues with its implementation. Namely, certain bodies have continually refused to give out information, provided incomplete data or data in formats which are harder to analyze because they require retyping the provided documents in their entirety (e.g. interviewed researchers have pointed out that they receive the requested information in hard copies or scans),[54] among others.[55] The need of CSOs for this data is additionally demonstrated by the fact that CSOs submit a significant number of complaints to the Commissioner for Information of Public Importance and Personal Data Protection because of their requests not being fulfilled adequately. For example, during the first seven months of 2016, CSOs were the third largest group in submitting complaints to the Commissioner, as presented in *Chart 2* below.[56]

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52 Eóin Young, "Policy research design Lab – Building a solid foundation for policy influence," Workshop, November 2015.
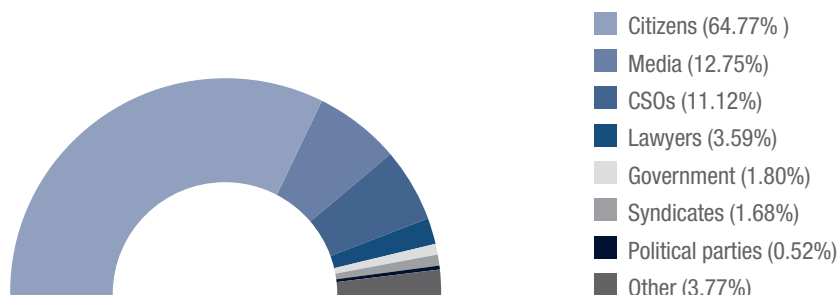
53 The Global Right to Information Rating encompasses legislation in 102 countries across the world. More information, as well as the ranking itself, can be accessed here: https://www.rti-rating.org/ (accessed May 5, 2016).

54 Article 18 of the Law on Free Access to Information of Public Importance indicates that authorities should provide the required information in the format which was requested, unless the respective authority does not have the necessary technical capacities to provide the data in this format.

55 Bojana Barlovac, Serbia's Public Information Act Tops Global Ranking, Balkan Insight, 22 February, 2012, accessed May 5, 2016, http://www.balkaninsight.com/en/article/serbia-tops-global-ranking-of-public-information-act.

56 The data can be accessed at the Commissioner's open data portal: http://data.poverenik.rs/dataset/zalbe/ (accessed June 30, 2016).

Chart 2: Complaints to the Commissioner for Information of Public Importance and Personal Data Protection by group. [based on data from January to June 2016]

- Citizens (64.77%)
- Media (12.75%)
- CSOs (11.12%)
- Lawyers (3.59%)
- Government (1.80%)
- Syndicates (1.68%)
- Political parties (0.52%)
- Other (3.77%)

However, there might be a wider issue in addition to the 'data light' environment in which civil society researchers operate. The other problematic area is the lack diversity in research methodologies and the related reliance on qualitative methods, i.e. very few research projects engage in quantitative methods or apply a mixed methods approach. For the purpose of this paper, research publications of nine relevant think tanks and research-based CSOs, published within the past year (June 2015 - June 2016),[57] were analyzed with respect to their methodologies. The results point out to severe lack of quantitative methods and by extension mixed methods, whereby only a few publications include descriptive statistics, while inferential statistics were not spotted in any of the publications. As *Chart 3* presented below demonstrates, whilst relying on qualitative methods, the research endeavors of Serbian think tanks and other research-based CSOs employ mostly the following methods: focus groups, interviews, and document analysis (legal documents, media articles, etc.).

Chart 3: Methodologies used by Serbian think tanks and research-based CSOs, in publications from June 2015 - June 2016.

- Document analysis (53.85%)
- Interviews (17.31%)
- Questionnaire/Survey (9.62%)
- Descriptive statistics (5.77%)
- Other (13.46%)
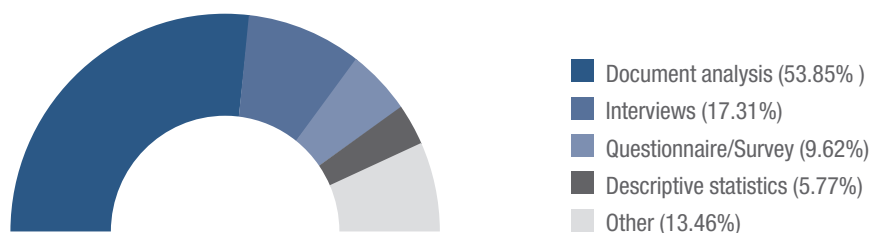
Nevertheless, this problematic situation with respect to existing methodologies has been noted both by academic and policy researchers working in or on the Balkan region or Central and Eastern Europe (CEE) as a whole. For example, in his assessment of think tanks operating in CEE, Goran Buldioski argues that they need to improve and redefine their research methodologies by making them more versatile and innovative, as well as setting standards for their quality.[58]

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57 These nine think tanks and research-based CSOs were chosen because they frequently produce research publications and have a wider reach in terms of their readership and media coverage.

58 Goran Buldioski, "Think Tanks in Central and Eastern Europe and the Need to Improve the Quality of Their Policy Research." MA thesis, Central European University, 2010, 43

> *In a region as politicized as Central and Eastern Europe, politically and policy relevant*
> *research means rich ethnography, focus on localities or sectors which are indicative of*
> *broader trends in politics or political economy; there are plenty of opportunities and swathes*
> *of under-researched subjects. The region, after all, knows very little about itself.[59]*

The last sentence is complementary to the aforementioned characterization of the Balkan region as being 'data light' in terms of the existing datasets which can be researched. If released by the government in an adequate and comprehensive manner, open data can provide a significant source of data which could transform the existing 'data light' research environment and hence provide think tanks and research-based CSOs with an instrument for diversifying and enhancing their methodological approaches. However, with regards to this potential, interviewees have pointed out several limitations of think tanks and research-based CSOs in Serbia, ranging from their small number to their capacity to analyze data.

The first limitation appears to be that there is a small number of CSOs engaging in research in a serious and comprehensive manner. As one interviewee pointed out, although she herself believes that advocacy requires an evidence-based approach, she thinks a lot of CSOs view it as a "secondary activity" and do not attach enough importance to it.[60] Another issue mentioned in several interviews is that the donor community does not place enough attention on research activities as components within projects or research-based projects in general. However, one researcher pointed out that this situation is changing for the better, with the increased availability of programs such as Horizon 2020, which is the most comprehensive EU Research and Innovation program.[61] The third identified issue are the overall limited capacities of CSOs to engage in methodologically more comprehensive and data-centered research projects, which might require access to expensive academic databases, similarly costly analytical software (such as Stata for statistical analysis or MAXQDA for qualitative analysis), and additional methodological trainings.

Taking all these CSO limitations into account, the most constructive question may not be whether CSOs would be able to adequately analyze open datasets and diversify their methodologies if open data immediately became the policy of every government institution. A better question might be whether the existence of open datasets in itself, which would transform the current 'data light' environment, could serve as an incentive for researchers to increase their analytical capacities and apply mixed methods more frequently. Albeit this vicious circle of questions leads to a looped discussion, the interviews, as well as the Commissioner's data on CSO complaints, demonstrate the existing need of CSOs for adequate data and their willingness to adapt to new situations and apply all possible means for collecting needed information. Hence, it would be legitimate to argue that an increase in open data could push think tanks and research-based CSOs towards engaging in more comprehensive and versatile research projects.
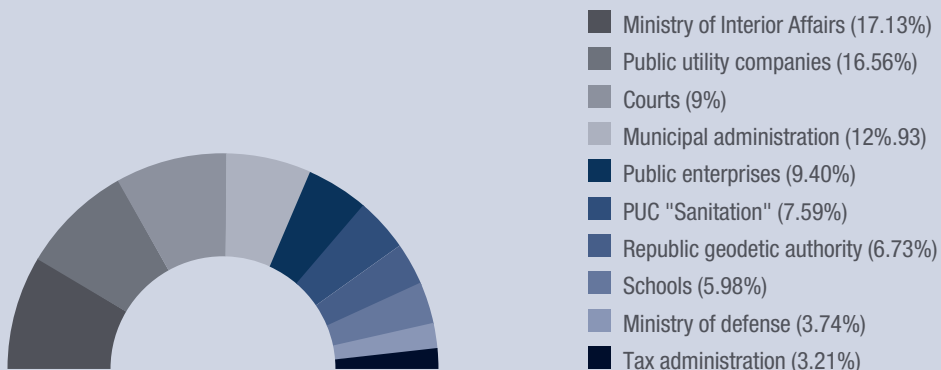
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59 Ibid.
60 Interviewed by author, Belgrade, July 18, 2016.
61 Nonetheless, it is important to mention that these funding programs are intended for serious research efforts. Given the current research environment within civil society in Serbia and the lack of robust research efforts, the availability of these programs should entice think tanks and other CSOs conducting research to enhance their capacities for data analysis, open data and big data in particular.

As a case study, this researcher embarked on a brief analysis of the data opened by the Commissioner for Information of Public Importance and Personal Data Protection. This 'experiment' of sorts was an attempt to explore the utility of the data which was, by the Commissioner himself, described as important more for symbolizing the value of open data, rather than embodying it.[62] Having no prior experience in analyzing open data, which is a common trait for most policy researchers in Serbia, this research exercise yielded both challenges and interesting results. Among the challenges were: importing the CSV format into Excel (despite the fact that the Commissioner's website had fairly detailed advice on this matter), managing data and preparing it for analysis, mixing of Latin and Cyrillic alphabet within the dataset, and others. Most of these challenges can, however, be assigned to the lack of experience of the researcher, as well as the time consuming and at times frustrating task of data management. When it comes to analysis, one dataset among 13 published by the Commissioner was utilized, namely the dataset regarding the access to information complaints made to the Commissioner.[63] The scope of analysis was limited to January-June 2016 due to the size of the dataset. Even with this limitation, the remaining complaints amounted to 1,726.

Chart 4: Complaints to the Commissioner for Information of Public Importance and Personal Data Protection by institution or institution type the complaint was made against. (based on data from January to June 2016)

- Ministry of Interior Affairs (17.13%)
- Public utility companies (16.56%)
- Courts (9%)
- Municipal administration (12%.93)
- Public enterprises (9.40%)
- PUC "Sanitation" (7.59%)
- Republic geodetic authority (6.73%)
- Schools (5.98%)
- Ministry of defense (3.74%)
- Tax administration (3.21%)

Despite the challenges, the data proves interesting in identifying possible trends in complaints, as well as outliers within those trends. *Chart 4*, for example, demonstrates which institutions or types of institutions have the highest number of complaints made against them. This data demonstrates a tendency of the Ministry of Interior, public utility companies, and the courts to provide inadequate information or withhold information in disrespect of the Law on Free Access to Information of Public Importance. Concerning the potential for identifying outliers, for example, *Chart 5* below presents the localities from which the complaints came.

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62   Interviewed by author, Belgrade, June 20, 2016.
63   The data can be accessed at the Commissioner's open data portal: http://data.poverenik.rs/dataset/zalbe/ (accessed June 30, 2016).

Chart 5: Complaints to the Commissioner for Information of Public Importance and Personal Data Protection by place. (based on data from January to June 2016)
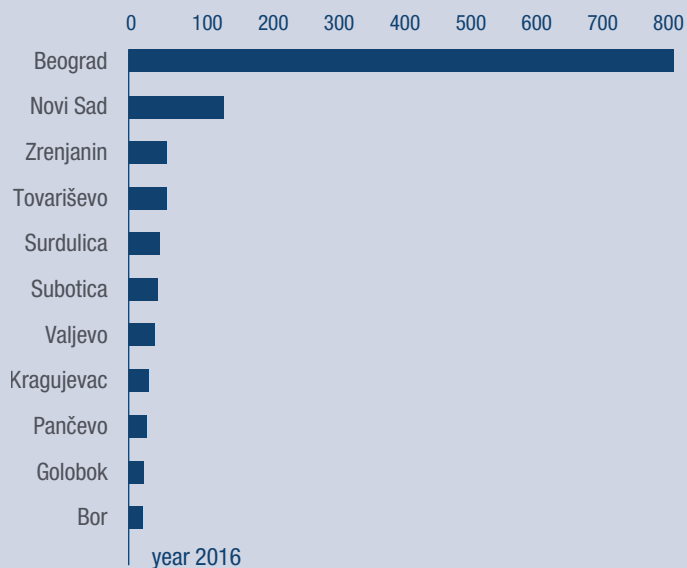
Expectedly, the two biggest cities, Belgrade and Novi Sad, produced the highest number of complaints within 2016. However, the fourth and tenth spot go to two unexpected outliers, Tovariševo, which is a village of slightly more than 3,000 people, and Golobok, another village with less than 3,000 people. These two outliers indicate that exploring access to information at the local level could be a fruitful research project. What this information demonstrates is that, although the Commissioner himself has his doubts about the utility of the data, their trends and outliers could be relevant for any researcher engaging in researching transparency or access to information issues in Serbia.

3.2 | Improving the Think Tank Reputation and Visibility

Think tanks and research-based CSOs have an important role in Serbia - to inform and advise the policy-making process: during public consultations between the government and wider society, through elaborate research projects involving dissemination and advocacy of research results and recommendations to governmental decision-makers, by organizing stakeholder workshops or media campaigns, et cetera. This role and the legitimacy of these CSOs depends in part on the quality of their methodologies and data analysis. However, both the role and legitimacy, as well as influence, of these think tanks and research-based CSOs have been questioned by the government, the media, and the wider society. This lack of trust in research coming from civil society organizations within the domestic sphere is not limited to Serbia, but to the region as a whole. Additionally, this is not a new problem, but an ongoing issue which has been addressed by academic literature as well. As Ivan Krastev explained in 2001, post-Communist societies experienced an increase in independent policy research organizations and their funding.[64] However, as he explained, "the research coming out of think tanks is not regarded as an important contribution to policymaking. Politicians are ready to recognize the influence of the think tanks' directors but not the influence of the think tanks' research."[65] Albeit this situation has somewhat changed throughout time and through continual funding from different international, national, and transnational donors, the research of think tanks and other CSOs still has a limited reach and recognition. As was demonstrated in the previous section, think tanks and research-based CSOs in Serbia demonstrate a clear tendency towards qualitative methods. However, within the context of this paper, why would one characterize such a heavy reliance on qualitative methods as an issue and open data as a solution?

Firstly, qualitative data, if not presented and justified adequately, may appear as purely anecdotal. Adequate presentation means including a methodology section, either as a chapter or an annex, justifying the chosen methods and sample, and discussing the limitations of a given methodology. While assessing the research studies and other publications made by Serbian CSOs within the past year, it was found that more than 50% of publications fail to include a methodology section, either as a subsection of the main text or annex, often devoting only a paragraph or footnote to their chosen methodology. In addition, even when the methodology is described with a few sentences incorporated into the main text or the footnotes, these descriptions often lack an adequate justification for why that specific methodology was chosen, as well as what its limitations are. Accordingly, one representative of the academic community, who is working on establishing a digital archive on research data in Serbia, complained about the CSOs' methods of data collection, claiming that they do not adequately explain their indicators or provide relevant information on how the data was collected.[66]

On the other hand, quantitative data, which allows for generalization and may lend more legitimacy to the findings, can sometimes be the most effective tool to reach governmental decision-makers. The assumption behind this claim is that these decision-makers cannot be persuaded by 'opinions' gained through interviews or focus groups, but would realize the scope of the problem if dozens or hundreds of people stated a similar complaint through a questionnaire or especially if the problem was proven by using the government's own

64 Ivan Krastev, "Think tanks: Making and faking influence," Southeast European and Black Sea Studies 1.2 (2001): 17-38, accessed April 18, 2016, DOI:10.1080/14683850108454635.
65 Ibid, 21.
66 Interviewed by author, Belgrade, June 21, 2016.

data. Including quantitative methodologies and analyses based on government data make the research harder to refute, and validate the results gained through qualitative methods. In fact, reliance on quantitative methodologies is a common trait for think tanks operating in more data rich environments, as quantitative results are more easily disseminated to a "non-specialist audience."[67]

Lastly, CSOs in Serbia have been affected by government efforts at delegitimizing these organizations and their results, which, more often than not, point out the faults in the government's actions or the political system as a whole. Given that CSOs are usually funded by foreign donors, the process of delegitimization is mostly based on values - Western versus traditional, foreign versus Serbian, among other value dichotomies - whereby CSOs are presented as embodying unwanted foreign values, contrary to those held by the government and the wider society. Through open data and its quantitative analysis, these vague and damaging value dichotomies could be pushed to the sidelines, and the CSOs could strengthen their image as objective evaluators of the state at hand.

Nevertheless, while increasing the use of quantitative or mixed methodologies could have multiple benefits for think tanks and research-based CSOs, the appropriateness of the methodology and the quality of the data should come first. The government still has a long way to go in improving how it opens data, how often it updates it, whether it provides relevant metadata and descriptions, et cetera. Thus, the design of some datasets should possibly be changed to suit the methodological needs of the researchers and the wider open data community in the long-term. Given that there's a long path towards quality data opened by the government, CSO dependence on qualitative or anecdotal evidence is understandable to an extent. However, by demanding this data from the government and increasing their capacities for managing and analyzing open data, as well as big data, think tanks and research-based CSOs in Serbia could create multiple opportunities for themselves in terms of diversifying their methodologies, improving the quality of their evidence for policymaking by adding a quantitative dimension, and increasing their legitimacy with relevant government stakeholders, as well as society as a whole. Hence, open data could prove to be a powerful instrument in enhancing the reputation, legitimacy, and visibility of Serbian think tanks and research-based CSOs in the domestic sphere, and possibly abroad as well.

3.3 | Market of Project Calls and the Role of the Donor Community

When discussing what think tanks or research-based CSOs could do with open data and how they could demand it, it is important to keep in mind that CSOs in general in Serbia, as well as in the region, are financially sustained mostly by outside donors through project funding. This lack of sustainability and dependence on outside funding does inevitably significantly shape the project landscape in Serbia. In accordance with the previously explained example, as soon as UNDP as a donor showed interest in the topic of open data, more CSOs began demonstrating an interest as well.[68] Put simply, in the market of project calls, if the donor community demands certain topics, the civil society organizations quickly adapt to supply the needed project proposals. As one interviewee explained, every project proposal is primarily thought of in terms of the long-term strategy

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67   John McLavey, "Understanding policy research in liminal spaces: Think tank responses to diverging principles of legitimacy," *Social Studies of Science* 45.2 (2015): 276, accessed May 15, 2016, DOI: 10.1177/0306312715575054.
68   Interviewed by author, Belgrade, June 21, 2016.

published by the donor and identified topics the donor defined in the project call.[69] However, this adaptability of CSOs does not entail that think tanks and other CSOs have no agency over what they work on, rather, it points to the need to engage the donor community in the topic of open data alongside engaging the civil society. Put simply, increased civil society demand for open data will not happen without the support from the donor community. Nevertheless, it is important to address both why the donors would get more involved in the topic of open data, as well as why they should.

The projects which were conducted on the topic of open data thus far included open data as their focus and main objective. With those projects, the donors could claim that they helped increase government transparency or access to information. For example, the Commissioner's open data project, led by the Educational Centre, was funded through the USAID's Judicial Reform and Government Accountability (JRGA) Project. After the event, both the JRGA website and the USAID Serbia Facebook page featured an official statement regarding the project. While the story on the JRGA website referenced one of the USAID representatives' statements focusing on the significance of open data and the hope that it will become one of the government's priorities, particularly in the context of the Open Government Partnership, the Facebook post began with a catchy statement: "Here you go, the public has a right to know."[70] This points to the fact that the members of the donor community have a similar need as CSOs themselves - to justify their activities, demonstrate their relevance, and propagate their impact in the wider society in which they operate.

However, the significance of open data for the donors, civil society, and the wider society is much greater than simply transparency and access to information, although both of these are undeniably relevant goals of open government. Put simply, open data does not need to be the sole goal of a project, it can be a project component or deliverable aimed at producing relevant data for further research, monitoring and evaluating government activities, or even for impact assessment of certain projects in the long term. From all of the above-stated potential benefits of open data, its relevance for impact assessment might be the strongest reason for the donor community to become more involved in producing project calls which include open data to some extent. Whether a project envisages helping the government to open its data or collecting and opening data relevant to the project topic, it allows the donors to, in both the short and the long term, assess and monitor the impact of their financial support.

The first counterargument in connection to CSOs opening their data during specific projects might be that projects usually last a year or a few years at best, which does not allow for a continued provision of open data. However, one-off publication of open data can be useful as well. During his interview, World Bank Open Data Consultant, Ton Zijlstra argued that, while sustained open data has more cross-cutting usage in terms of being used by the private sector or the tech community as well, one-off open data is also helpful and relevant for CSOs.[71] The second counterargument is that opening data as a part of CSO projects could be costly for CSOs who do not have tech-oriented employees with adequate capacities for producing and using

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69   Interviewed by author, Belgrade, July 18, 2016.

70   The JRGA website statement can be found at: http://www.jrga.org/news/pokrenut-portal-za-omogucavanje-pristupa-informacijama-od-javnog-znacaja-u-formi-otvorenih--podataka/ (accessed June 14, 2016). The USAID Serbia post can be found at: https://www.facebook.com/USAIDSerbia/photos/a.252547724790394.64973.153740448004456/1089626494415842/?type=3&th eater (accessed June 14, 2016).

71   Interviewed by author, Belgrade, June 14, 2016.

open data, and which would need to hire experts for each project that includes open data. With regards to this obstacle, one interviewee emphasized the need for a bigger capacity-building project which could enhance the necessary technical capabilities of CSOs to create and analyze open data. However, even with these two possible counterarguments, the potential of open data as a tempting deliverable for donors remains. What is needed in this context then is for the donor community to realize the relevance and potentials of open data, both for Serbia and its civil society, as well as for the donors themselves.

4 | NOT ONLY CONSUMERS? POTENTIALS FOR PRODUCTION OF OPEN DATA

Recognizing the fact that the concept of open data is not limited solely to the opening of government data, the following two sections deal with a wider conceptualization of open data creation. The first section will thus focus on CSOs, in particular think tanks and research-based CSOs, and their potential for producing open data. On the other hand, the second section will assess how these CSOs can collaborate with other sectors, namely the private sector, academia, the media, and the wider tech community, to produce and sustain open data endeavors. Therefore, the overall goal of this chapter is to expand the concept of open data to include other sources of data production and assess possibilities of open data production by civil society in Serbia, especially in cooperation with different sectors.

4.1 | CSOs as Producers of Open Data

The fact that most of the interviewed CSO representatives view themselves solely as potential consumers or users of open data, rather than producers of open datasets, is telling of how they define and utilize the concept of open data. In fact, while defining their vision of open data and its potentials, most interviewees reference open data in terms of data collected and released by the government. The reason why this slightly limited perspective is worrisome is that it points to a limited comprehension of open data and its potentials. However, several interviewees have indicated the need for increased transparency within the civil society sector, which could potentially be achieved through open data. One of the interviewees indicated the relevance of the donor community in this regard,[72] given that donors could create the demand for open data projects by including an open data component as a necessary condition for certain calls for proposals. On the other hand, the same interviewee indicated the potential benefits of technical assistance being provided to CSOs in terms of aiding them to open and utilize data. The added value of this could be, as another interviewee mentioned, that by producing and utilizing their own data, CSOs, especially think tanks and other organizations conducting research, could better understand and make good use of datasets released by the government.[73] Hence, there are several reasons to encourage CSOs to produce open data, dependent of course on the level of involvement of the donor community.

For one, CSO open data production could serve as a good example and incentive for government institutions to do the same. In this scenario, CSOs could become more equipped to aid government efforts at open data by, for example, helping with the open data design. Secondly, CSO transparency through opening of data could improve the negative image CSOs in Serbia gained during the '90s propaganda created by state-owned television, which portrayed CSOs and their representatives as 'traitors' funded by foreign 'Western' money and values damaging for the Serbian society.[74] This is an image which persists today and is actually reinforced by certain government officials and the media.[75] Yet, CSO transparency through open data could begin to ameliorate this image, in the worst case scenario by merely demonstrating the economic benefits that come with civil society projects and how their budgets trickle down to local providers of goods and services. Thirdly,

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72   Interviewed by author, Belgrade, June 13, 2016.
73   Interviewed by author, Belgrade, June 15, 2016.
74   Zdenka Milivojević, "Civil Society in Serbia Suppressed During the 1990s – Gaining Legitimacy and Recognition After 2000," CIVICUS Civil Society Index Report for Serbia, 2006, accessed February 19, 2016, http://www.civicus.org/media/CSI_Serbia_Country_Report.pdf.
75   Belgrade Centre for Human Rights, "Human Rights in Serbia 2015 Report," 2016, accessed June 8, 2016, http://www.bgcentar.org.rs/bgcentar/wp-content/uploads/2013/04/Ljudska-prava-u-Srbiji-2015.pdf, 21.

it could become easier to assess the overall impact of civil society in the country if each CSO decided to contribute their open data regarding financial and impact assessment/project evaluation data. This feeds back into the second argument, namely the need to improve the image of civil society in Serbia, because if these aforementioned financial and impact-related data were open and a more precise analysis of the overall impact of civil society in Serbia could be made, then this information could be utilized to reshape the image held by the wider population and provide an evidence-based argument regarding the importance of CSOs. As a few interviewees noted, opening up CSO budgets or research data enhances not only the transparency of this sector, but also its reliability. Lastly, if more CSOs began creating open data, even if they create one-off datasets, all of the datasets provided by CSOs would create a rich pool of data which could feed into different projects and improve the existing 'data light' environment.

Whether CSO-produced open data stems as the result of opening up financial information, research results, or impact assessments, it is clear that open data carries a lot of potential for CSOs. It would be relevant to state that this is particularly true for think tanks and research-based CSOs who would have access to more open datasets and enhance their knowledge of how to adequately approach utilizing open data. However, these CSO efforts do depend on whether certain steps are made by the donor community. Has the donor community recognized the value of open data projects or open data as a deliverable in CSO projects? Has the donor community aided the civil society to improve its technical skills and capacity for analyzing and producing open data? If either of these two steps is taken by the donor community or larger individual donors, this could create space for CSOs to constructively utilize the benefits of open data production as presented in the sections above.

4.2 | Cross-Sector Collaboration: Private Sector, Academic Institutions, Media and Tech Community

It would be counterproductive to limit the list of CSOs' potential partners in open data efforts to the donor community. The private sector, academic institutions, the media, as well as the tech community could all engage in mutually beneficial open data-focused collaborative efforts with civil society organizations, think tanks and other research-based CSOs in particular. Each of these sectors comes with their own set of possible interests in open data, as well as capacities for using open datasets. Accordingly, each sector's interests and capacities could be complementary to those of civil society organizations engaging in research. While some of these cross-sector collaboration opportunities seem obvious, others would require a certain leap of faith merely because they represent an untested practice in Serbia.

Media organizations, particularly those engaging in investigative work, present an obviously mutually beneficial choice for an open data partnership with civil society organizations. In theory, media organizations present a stakeholder CSOs should be able to count on for dissemination of their research results. Accordingly, media representatives could follow and report on open data produced by CSOs in continuity, without civil society actors having to organize events or deliberately produce content for the media. Nonetheless, this sort of cooperation would require continually increasing media capacities for adequately analyzing open data.[76]

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[76] However, as the Open Data Readiness Assessment indicated, an additional issue is that media outlets in Serbia are often attached to certain political parties or streams. See: Zijlstra, 24.

However, in practice, the major media outlets and the overall media environment is constrained by the political environment, which inhibits objective, investigative journalistic efforts.[77] Hence, CSOs in Serbia can count only on a number of smaller media outlets with limited readership. Conversely, major media outlets have actually engaged in continual smear campaigns of particular CSOs or civil society representatives, so any partnership with these outlets would require either a change in how these media report or a change in their relationship with CSOs. In any case, CSO and media partnerships on open data would require building trust between the media and the civil society. While the former would need to be persuaded in the validity of the civil society data, the latter would have to believe that there are media outlets and particular journalists that can properly utilize open datasets and draw objective and verifiable conclusions from them.

Similarly to the media, academic institutions are another obvious partner for CSOs engaging in research. On the one hand, certain academic institutions, especially those with departments with extensive knowledge in research methodologies or statistics and IT-focused departments,[78] may have greater capacities than CSOs to conduct proper research on open data.[79] In this context, CSOs can partner with specific academic institutions to utilize their data analysis skills, collaborate on developing research methodologies suited for analyzing open data, employ human or financial resources which are more readily available at universities, or even design the collection and management of open data for particular projects. On the other hand, academic institutions can serve as partners to CSOs who plan on producing and utilizing large open datasets which require data analysis software usually available at universities, but which is too expensive for civil society organizations which have more limited research funding and human resources.

While the private sector might seem like an unlikely partner for civil society organizations, it could be the key to sustainability of outside funding-reliant CSOs in Serbia.[80] Namely, if think tanks and other research-based CSOs were to improve their capacity at opening, managing, and analyzing datasets, they could provide relevant analyses, reports, or datasets for the needs of the private sector. Apart from providing an alternative source of funding, this would allow CSOs to demonstrate their necessity in a society which is still uneasy about the role of civil society.[81] However, there are three obvious limitations to this type of cross-sector collaboration. Firstly, the practice of civil society and private sector collaboration is not established as a common one in Serbia. Secondly, few think tank and research-based CSOs delve in topics which could be of interest for the private sector. Lastly, think tanks and other CSOs conducting research would have to improve their capabilities at data production, management, and analysis in order to become a legitimate source of analysis for the private sector.

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77   For more information on the media environment in Serbia, see Freedom House 2015 report:
     https://freedomhouse.org/report/freedom-press/2015/serbia.
78   For example, at the UNDP conference on open data in December 2016, a representative of the Faculty of Technical Sciences of the University of Novi Sad indicated both that they have the necessary software and skills to conduct analysis on open data (including big data), as well as that they would be willing to partner with the private or civil sector.
79   At the "Open Data, Open Opportunities" conference in Belgrade, December 2015, one of the discussants from the University of Novi Sad, Faculty of Technical Sciences, elaborated on the extensive capacities of the Faculty to quantitatively analyze open data, as well as big data.
80   Good policies do not carry relevance solely for the government, civil society, and the wider public, policy-making is a topic of great importance for the private sector as well. Accordingly, stakeholders interested in the work of think tanks have emphasized the possibility of the private sector to incentivize the work of think tanks. See, for example:
     http://repository.upenn.edu/cgi/viewcontent.cgi?article=1006&context=ttcsp_summitreports.
81   For example, see a report published by Civic Initiatives in 2009: https://issuu.com/gradjanskeinicijative/docs/public_perception_2.0.

The tech community may seem like a vague term for a wide array of groups and individuals, ranging from start-ups to online groups filled with data analysis enthusiasts, from programmers to designers, etc. All of these groups and individuals can work as compatible partners for CSOs engaging with open data.[82] For example, designers can work with CSOs on optimal ways in which their open datasets can be visualized and made interactive and understandable for different users - whether it is the government, the media, or the wider public. However, a more unconventional partnership could be if CSOs would include tech communities, groups, or individuals as co-applicants or associates on different projects. Creating technical solutions such as web or mobile applications which build on open data and which could be used for impacting, informing, or educating the wider society on particular matters could be an example of a fruitful collaborative project connecting CSOs and groups or individuals who are a part of the wider tech community.

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82   Open Data Kosovo is a good example of an initiative that frames their open data efforts in the context of community-building. Namely, they offer mentorship and training programs adapted to different levels of technical knowledge, as well as different sectors. See more at: http://opendatakosovo.org/open-data-kosovo-mission/.

5 | RECOMMENDATIONS

Despite the major research obstacle of attempting to analyze demand for something which does not yet exist in Serbia or, more precisely, is limited to a few institutions and a few dozen datasets with limited research value, the findings presented in this paper managed to gather insight into open data demand in Serbia. While the extent of civil society interest in open data is currently limited to a few organizations, the currently existing open data niche made up of these CSOs is influential enough and able to effectively advocate for open data. However, there is space for improving and expanding the awareness of open data within the wider civil society circle in Serbia. The CSOs currently active in demanding open data could serve as a good example for both the government and the rest of civil society by becoming producers of open datasets, even if they are one-off datasets, rather than sustained open data efforts (for example, by publishing budget spending for a particular project in open data format). Additionally, the analysis of research methodologies of think tanks and research-based CSOs demonstrated the impact open data could have on improving the 'data light' research environment in Serbia and enabling think tanks and other CSOs to diversify and enhance their methodologies, which are currently fairly homogenous. In all of these efforts, the donor community will prove as a crucial actor given that the existence of open data related project funding opportunities will determine the overall interest of civil society in this topic. Lastly, it is necessary to mention cross-sector collaboration as a viable option for think tanks and other CSOs interested in or engaging with open data. As demonstrated in the last chapter, media, academic institutions, the private sector, and the wider tech community, can all serve as legitimate partners for CSOs' open data efforts.

Overall, as the research conducted for this discussion paper demonstrated, there is a fairly active open data niche among civil society organizations which are creating a productive community able to mobilize more active participants across different sectors. The versatility of the members of the Open Data Working Group is aiding this processes, apart from contributing to the legal and practical framework for open data for government institutions. In addition, the Open Government Partnership could serve as a long-term platform for civil society to influence and become engaged with the open data efforts of government institutions, both at the central and local level. Additional platforms for collaboration could be based on specific project calls by donors, open data hackathons, or the CSOs' own open data creation either in terms of financial transparency or in the context of data gathering on specific projects.

As was emphasized throughout the paper, there could be far-reaching benefits for CSOs if they decided to open their data or utilize datasets opened by the government. The following recommendations are designed for think tanks and other CSOs conducting research, whether their research is a part of their evidence-based advocacy efforts or if it aims to educate the wider public. Whether or not these CSOs have showed an interest in open data until now, these recommendations could prove useful by opening the CSOs to different directions their open data efforts could take, at least in the long term. An additional set of recommendations is provided for the donor community, whose involvement in open data efforts or acknowledgement of the importance of open data in Serbia, could affect the CSO demand for open data and lead to an increased supply of civil society projects incorporating open data.

5.1 | Recommendations to think tanks and other research-based CSOs

› Think tanks and other CSOs conducting research should improve their analytical capabilities in order to adequately produce, manage, or utilize datasets opened by the government. Given that only a few institutions have opened their data until now, civil society researchers can practice their skills on these datasets, while at the same time discovering and assessing possible weaknesses and design issues in the currently opened government datasets.

› Think tanks and other CSOs conducting research should diversify and enhance their research methodologies by including the (quantitative) analysis of open datasets. While there is admittedly a limited number of available open datasets in Serbia, as their numbers rise, CSOs could become more experienced in including these datasets in their research and thus strengthening their evidence-based advocacy efforts, as well as more frequently applying a mixed methods approach.

› Think tanks and other CSOs conducting research should consider the option of producing open datasets, even if they are one-off, rather than continual efforts, as a way of increasing civil society transparency, as well as serving as good examples to government institutions and other CSOs. Additionally, by contributing their datasets, these CSOs would improve the currently 'data light' environment in Serbia.

› If they were to improve their data management and analysis skills in the context of open data and big data, think tanks and research-based CSOs could become more financially sustainable by providing data management and analysis skills to the private sector.[83]

› The media could be a valuable partner for think tanks and other CSOs conducting research, in terms of disseminating their open data findings, whether they come from government or civil society datasets. However, CSOs should build a trusting relationship with certain media representatives by educating them on the relevance of open data and the basics of analyzing open datasets. However, given the current state of the media sphere in Serbia and the related restrictive political environment that inhibits investigative reporting within the mainstream media, this recommendation is heavily dependent on collaboration with smaller, fringe and independent investigative media organizations, networks, and portals, at least in the short term.

› Think tanks and other CSOs conducting research should tap into the tech community and find possible partners for open data projects with whom these CSOs could develop innovational ways of using open data - whether it is through the creation of web or mobile applications, or engaging interactive data visualizations.[84]

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83 Collaboration with the private sector has been one of the frequently mentioned recommendations for think tank sustainability. However, limitations that come with this type of collaboration should be taken into account. For example, see Darcy Ashman's article "Civil Society Collaboration with Business: Bringing Empowerment Back in," *World Development* 29.7 (2001): 1097-1113.

84 The experience of Croatia's open data progress showed that the tech community was the best channel for demonstrating the value of open data and introducing government officials to it. Based on the lessons learned in the neighboring country, CSOs in Serbia could team up with members or groups within the tech community, which could be better equipped to both handle open data, as well as demonstrate its value in practical terms.

› Think tanks and other CSOs conducting research, who are interested in being involved in the topic of government open data, should become more active within the Open Government Partnership in Serbia, either by monitoring how open data commitments are handled by the government or by becoming active participants at OGP consultative meetings and proposing commitments which could be included in the new national action plans.

› Think tanks and other CSOs conducting research by utilizing open data should consider academic institutions as possible partners on specific research projects. Namely, academic institutions could provide necessary methodological skills, human resources, or data analysis software which think tanks and CSOs do not have access to, but which could ensure adequate production or analysis of open data. However, not all universities and academic institutions in Serbia have developed these analytical and methodological capacities, so the potential of this recommendations is currently limited to a few institutions.

5.2 | Recommendations to the Donor Community

› Members of the donor community should become informed on the value and relevance of open data in the context of Serbia, or even the Western Balkan region as a whole. In addition, donors who have realized the potential of open data should officially endorse it, for example, through their long-term strategies, in order to encourage CSOs to provide project proposals incorporating open data.

› Members of the donor community should produce project proposal calls which include open data either as a possible overall objective, specific objective, or deliverable. Additionally, open data project calls could allow space for cross-sector collaboration so that CSOs can include academic institutions, the media, or members of the tech community, as their project partners or associates.

› Civil society, the media, or academic institutions could all benefit from a donor funded project aimed at increasing the capacity of these stakeholders to produce, manage, or analyze open data. Hence, members of the donor community should consider investing in technical capacities of the aforementioned stakeholders.

› Particular donors could consider publishing their open data in order to foster an atmosphere of transparency and serve as a good example either to government institutions or civil society organizations in Serbia.[85]

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85   For example, USAID has the Development Data Library which contains open data funded by this agency.
      See more at: https://www.usaid.gov/data.

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