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Open Government Data Initiatives and its Impacts on Citizen Empowerment: the case of “Caring For My Neighborhood”

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Abstract

Public sector information is disclosed on the web in many countries since early 2000s. To this date, governments, civil society organizations, and private sector representatives consider Open Government Data as a building block for open government, as they see it as a key enabler of improved service delivery, transparency, and public engagement, and, as a result, of better relations between governments and citizens. Improving government accountability, transparency, responsiveness, and democratic control, promoting citizens' self-empowerment, social participation, and engagement are important OGD alleged benefits. But scientific literature also presents and discusses challenges and barriers to the effective citizen empowerment, specially among the most marginalized ones. Unequal distribution of skills, resources and time have a big impact on who is making use of OGD. The reach they can have using OGD, as data literacy and skills of individual groups of citizens, and their access to technology, should also be considered. The goal of this research is to analyze the output, outcomes and/or impacts that a network of organizations, institutions and individuals derives from OGD through a case study in the city of São Paulo focusing on a budget-transparency tool used by unskilled citizens.

Key words: open data, impact, citizens empowerment

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1. Introduction

Public sector information is disclosed on the web in many countries since early 2000s. To this date, governments, civil society organizations, and private sector representatives consider Open Government Data as a building block for open government, as they see it as a key enabler of improved service delivery, transparency, and public engagement, and, as a result, of better relations between governments and citizens (Ubaldi, 2013). Improving government accountability, transparency, responsiveness, and democratic control, as well as promoting citizens' self-empowerment, social participation, and engagement are important OGD alleged benefits.

The commonly recognized main beneficiaries of OGD are: government, citizens, civil society organizations, private sector, and public service market place. In order to reach these results, data is transformed through five distinct processes of OGD use:

- data to fact;
- data to information;
- data to interface;
- data to data;
- data to service. (Davies, 2010)

But scientific literature also presents and discusses challenges and barriers (Jassen et al., 2012) to an effective citizen empowerment, specially among the most marginalized ones (Gurnstein, 2011). Unequal distribution of skills, resources, and time have a big impact on who is making use of OGD. The reach they can have using OGD, as data literacy and skills of individual groups of citizens, and their access to technology, should also be considered. Although it is argued that Open Government Data have the ability to facilitate networks of collaboration and co-creation that produce citizen empowerment, there is a lack in the literature about related OGD impacts and outcomes. It is also fundamental to understand the ecosystem (Harrison, T.M. *et al*, 2012; Hendler, C., 2010) of data producers, infomediaries, and users: not only each one's roles, but also the relationships among them which may contribute to, or inhibit, citizen empowerment.

The goal of this paper is to analyze the output, outcomes, and/or impacts that a network of organizations, institutions and individuals derives from OGD through a case study in the city of São Paulo focusing on a budget-transparency tool used by unskilled citizens. The Theory of Change approach can sharpen the planning and implementation of an initiative (Connel & Kubisch, 1995), and this work adopts the definitions of inputs, activities, outputs, outcomes, and impacts from the Outcome Mapping approach.

2. Research questions

In order to evaluate the outcomes and impacts of the “Caring For My Neighborhood” initiative, the following key questions were established:

- What impact has been caused by “Caring For My Neighborhood”?
- Is budget-data geolocation effective for better control and supervision over the use of public resources?
- Can this project contribute to the engagement or empowerment of citizens?
- Better access to budgetary information can influence the construction of policy agendas within social organizations?

3. The Case Study of “Caring For My Neighborhood”

The “Caring For My Neighborhood” initiative (CFMN) was designed for citizens to exert social control and oversee individual expenditures of their municipal governments. With the tool's features, public spending in the city of São Paulo is geolocated and displayed on a map, allowing anyone to make connections to her or his everyday life.

The color code used in the tool's pinpoints reflects real-time spending status, and can thus provide budgetary information in a more accessible form to the public. This tool has been used since 2012 by many social leaders and civil society organizations and operates in a network known as “Rede Nossa São Paulo” (“Our São Paulo Network”).

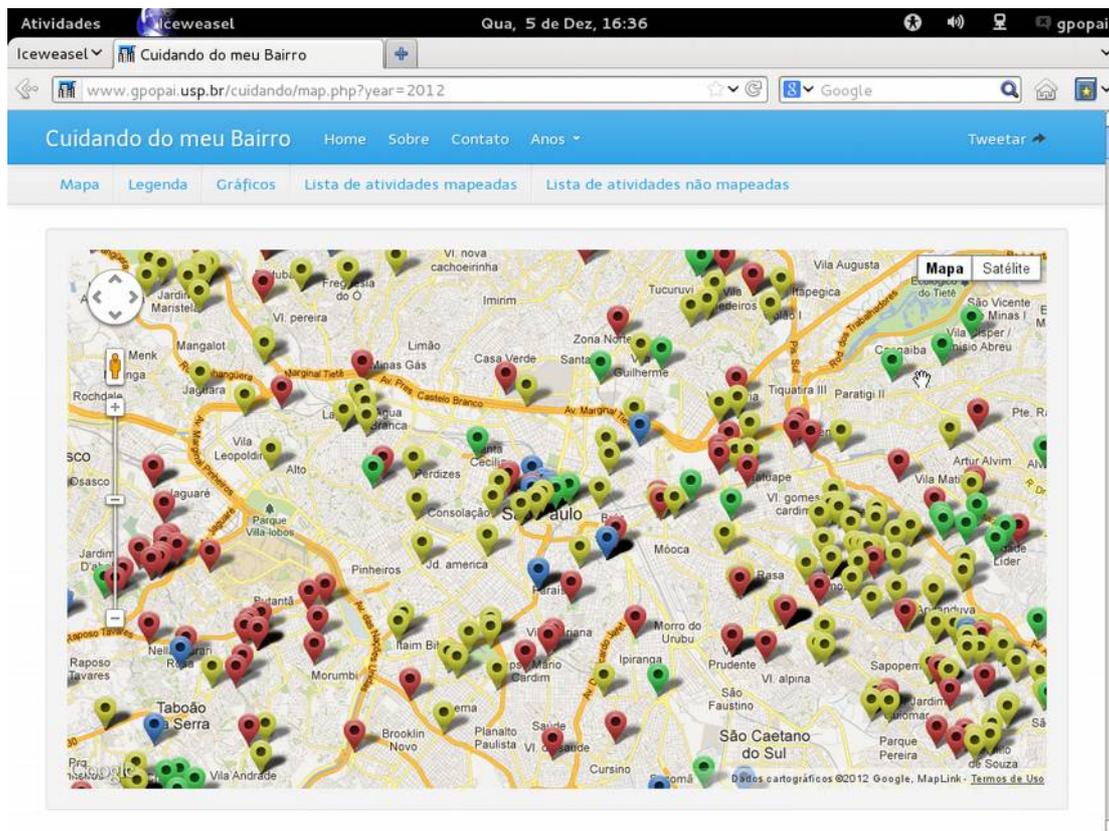


Image 1: A map displaying the 2012 public budget expenditures in the city of São Paulo, generated by the tool “Caring For My Neighborhood” (“Cuidando do Meu Bairro”)

It is important to mention that this initiative is not simply a Data to Interface transformation. Workshops on fiscal and budgetary concepts are given in order to minimize the information asymmetry. We consider that, along with the developers of the application, local and national civil society organizations play important roles in the ecosystem, sometimes interchanging from infomediary to consumer.

The research about the use of the tool was focused on answering how the access to budgetary information affects the relationship between civil society and public administrators on a local level. In addition to this, we tried to understand whether the tool was effective for better control and

supervision over the use of public resources and whether it can contribute to the engagement or empowerment of citizens in order to increase their influence on local development.

Despite the fact that budgetary data provided by the São Paulo municipal administration had no latitude and longitude coordinates, the tool searches for textual elements that can give detail about the location of expenditures, and generates a geocoded dataset.

In terms of the scheduled project cycle, CFMN is currently in the phase of feedback analysis and data evaluation.

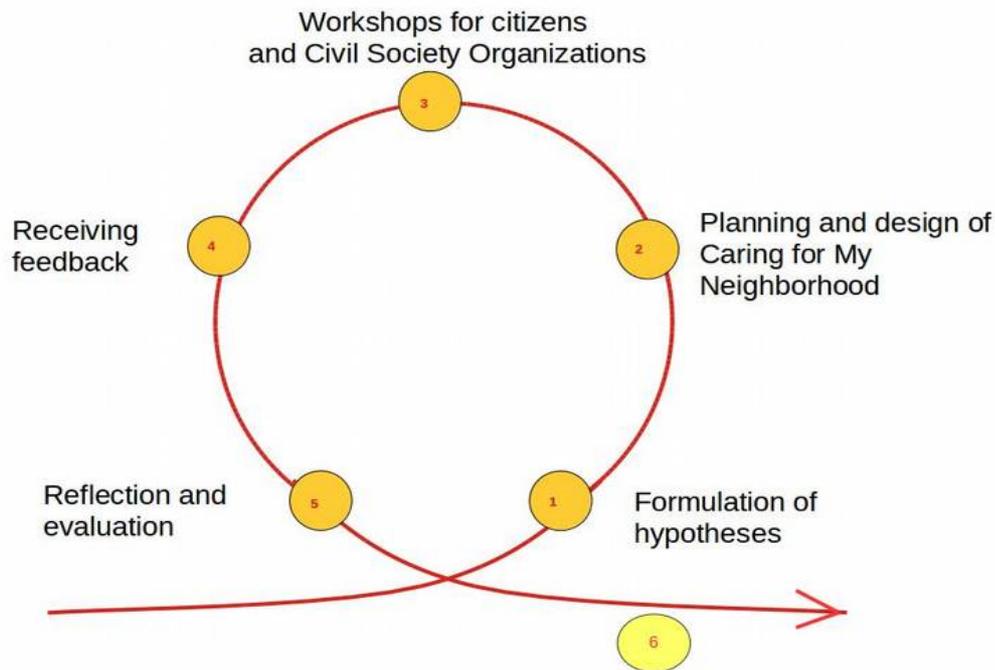


Image 2: Project cycle of CFMN

In this paper we refer to output as a planned short-term result, and to outcome as a medium-term result which is still in the area of influence of the project. We define impact as a long-term result. Impacts can be intended and unintended, positive and negative. The project outcomes can cause impacts. The World Bank defines impact of programs as “the effect on outcomes that the program directly causes. An impact evaluation looks for the changes in outcome that are directly attributable to the program” (World Bank 2007:7). To better understand the relationship between project outcomes and impacts, we traced an impact chain, which is presented at the end of the article.

4. Methodology

To understand the uses of the features of the tool, the following four groups were selected as a sample for the interviews as an ex-post-analysis:

- the leaders of the social movements who are involved in the “Citizenship School”, as well as the school staff;

- the participants of the event “1st Budgetary Transparency Week”, held at the São Paulo City Council.

In the first test group, the tool was presented to a group of 200 attendants at the “*Escola de Cidadania da Zona Leste*” (“São Paulo Eastern Region Citizenship School”), which is a space for knowledge exchanges among experts and social leaders from the eastern districts of São Paulo. There are about 3 million inhabitants living in that region of the city, who suffer from the absence of urban facilities in comparison with other areas of town.

The second test group was aimed at activists from social movements, political advisors, civil officials and actors involved in policy-making who took part in the 1st Budgetary Transparency Week (held by the São Paulo City Council and civil society organizations that are involved in budgetary transparency).

The tool was presented to both groups and some practical activities were suggested which could enable factors involved in the appropriation of the provided concepts and budgetary data to be analyzed. We also performed in-depth interviews with a sample of participants within both groups.

Additionally, we carried out interviews with municipal officials responsible for policy-making in the areas of access to information (the Municipal Board of Control), planning, and budgeting (the Municipal Secretary of Planning, Budget and Management).

In addition to the questionnaires and interviews, two technical visits and six observation visits were carried out to the “São Paulo Eastern Region Citizenship School.” In order to measure the impact of the tool, we selected sample groups among the attendees of the “Citizenship School.” Additionally, we performed individual interviews with social movement activists and experts in open data and public budget.

5. Findings on outcomes

5.1. The tool influenced the perceptions on open data among the responsible Secretaries

The relationship with organizations based on transparency, the open data movement, and the visibility that the tool has begun to acquire, have led to the municipal public administration inviting the team to replicate the tool within the municipal São Paulo transparency portal.

The General Comptroller of the Municipality decided to cooperate with the project in order to improve data quality. The changes had to be implemented by the city Secretary of Finance (SF) and the city Information Technology and Communication Department (Prodam). The discussions with the main government bodies resulted in the decision to undertake a series of measures in order to provide a better quality data for budgetary execution (personal interviews with staff of the General Comptroller of the Municipality and city Secretary of Finance, April of 2014).

The tool was interesting for the city Secretary of Planning (Sempla) because of the geolocation of expenditures. The possibility to compare public resource allocation on a geographic level opens new perspectives for data analysis and planning. When Sempla got to know the instrument, they were trying to connect the objectives of the city planning with the budget. With the help of the application, they were able to get a perspective that could build a bridge between planning and budgeting. The actors involved were the city Secretary of Finance (SF), the city Secretary of

Planning and the General Comptroller of the Municipality (personal interviews with staff of the General Comptroller of the Municipality and city Secretary of Finance, April of 2014).

Two internal processes are needed within those bodies in order to provide public data, both of which have been affected: the organization of data (including format adequacy and physical organization) and their publication. Each department has its own history of data storage and has developed particular “local systems.” Opening the data means restructuring data and data storage. There were several obstacles to overcome, like technological difficulties, difficulties on locating the expenditures' precise sectors since costs and purchases are distributed over several administrative units (the system has information on the purchase, but not on its distribution), etc. Several requirements have to be fulfilled, such as capacity building for staff, including the staff of outsourced IT solutions. Sometimes, capacity building on IT for elder staff also implies a cultural change, switching from a “data security”-based framework to an “open data”-based one.

Because of the CFMN initiative, those public bodies decided to integrate the geolocation component in their administration systems. The previous information systems on budget and spending had no space for geolocated information. Therefore, they added the correspondent field in the IT-System in order to enable georeferencing the budgetary information (localization according to the region, macro-region, sub-prefecture, and district).

5.2. Discussions on transparency and open data in public administration

Through CFMN, several discussions on transparency and open data were resumed and enhanced in the responsible public institutions.

Within the Municipality of São Paulo public administration, the discussion on social control has been welcomed in order to mobilize energies to overcome together obstacles like the difficulty in understanding the budget, the lack of information, and the excess of technical information.

The expectation of the Sempla manager is a kind of change of perspective of the municipality in the way of planning. The General Comptroller is now requesting more georeferenced information on spending.

In relation to the sociopolitical aspects, CFMN reinforced the internal discussions on active transparency and social control. Public administrators view social control in a very positive way, as the costs of supervision and control measures are very high. As the municipality is very complex, and control can be executed only by randomized trials, citizen control is an enriching factor. Even though there are more than one hundred internal auditors, there is a need of citizens' participation and control.

On the other hand, public administrators consider as a possible threat of opening data and more transparency the fact that also the occasional administration's mistakes are revealed and can be used to criticize those very public institutions. This could create future avoidance of opening more data in order to prevent blemishing of governments.

5.3 Raising citizens awareness on budgetary data

The tool facilitates the understanding of budgetary information for the citizens, even with low education, because of the geographic visualization of the information and the division according to the sectors. This was important, as,

“In comparison to your tool, I found that the system of the municipality makes it impossible for the average citizen to detect where public funds are being spent.” (personal interview with JMBS, November of 2013)

The platform facilitates the control of public spending. As it is an intuitive tool, the social and psychological barriers to access the platform are lower in comparison to disaggregated information. As one workshop participant stated,

“So [the citizen] needs a tool that disposes this information about all [funds] that the city is raising and where these investments are being relocated (...) I found it interesting because the tool uses the geo... A map where you can view the neighborhood, the city, and there you can know whether that area, that neighborhood has a particular investment, be it a school, a nursery, a reform of a block; then you can view the map, you open the tables there and get to know the amount of investment which is being put in that situation.” (personal interview with AMV, November of 2013)

In the opinion of the workshop participants, the budgetary control is important for citizens as they are tax payers and, when they do not control public spending, they are not assuming their responsibility. By controlling public spending and detecting irregularities, citizens are able to pressure the government through associations, popular movements and class entities. In consequence, most participants welcomed CFMN as an instrument of citizen control.

6. Findings on impacts

6.1. Influence on citizens

On a long-term span, better understanding of budgetary data can improve public engagement and the relations between governments and citizens. As CFMN is in its evaluation phase, which will result in the incorporation of citizens' demands and suggestions, we only have preliminary data on possible impacts on citizen engagement.

The interviews have shown that the access to budgetary information is much more facilitated, as the data provided by the municipality have been made available in a not comprehensive way – for OD laymen.

Relationships between politicians and citizens are complicated in Brazil. Many citizens have lost confidence in their elected officials, due to numerous corruption scandals. Using the tool, they can check whether the projects which were promised during the election campaign are being implemented or not. This may bring more transparency and citizen control, and thus contribute to restore confidence in the political system.

The CFMN tool is influencing the access to resources, as there is now a real option to control public spending. Poor citizens sometimes mentioned the hypothesis that the government is *a priori* benefiting more the rich neighborhoods instead of the poorer ones. The platform makes it easier for citizens to compare investments in the different regions (even though it would be interesting to introduce a special kind of request to perform these comparisons).

The challenge for citizens is to control information and to find data about investments not being

implemented yet. Irregularities provoke citizens to reflect about their own responsibility.

The implementation of public budgets is often directly contributing to the well-being of local population. In consequence, participants were especially interested in the possibility of monitoring the projects related to health system, education, public transport and housing. There were also many specific demands, *e.g.* by the maintenance of public spaces and playgrounds. The interest in local infrastructure projects is a key factor in involving citizens in the discussion on open data and the way to use it for communities' benefit.

Through the presentation and use of CFMN, some of the interviewees with low knowledge on budgetary information got a notion on the relationship between election of politicians, political decisions on spending, and the need for spending control. The initial attitude of impotent and powerless citizens changed into the perception that citizens are able to control where public money goes, and that they have to vote in the right politician in order to achieve good administration of public money. Considering this findings, we concluded that CFMN can be viewed as a learning tool.

6.2. Institutional influences

The contact with the project gave rise to several discussions among the involved secretaries of the Municipality of São Paulo. Because of the discussions and workshops with CFMN, since 2014, budgetary data is published in an improved, disaggregated format.

6.3. Media response

One of the key actors for making information obtainable and accessible is the media. During that period, we were included in national and local media outlets, on radio and TV programs, newspapers, and blogs, not only to speak about the tool itself but also to support the building of materials. In a two-page story on the *Diário de São Paulo* newspaper, a journalist made use of the CFMN tool to contrast the situation of two districts of the city: one which was granted more resources, and another one which received minor investments¹.

6.4. Influence for Civil Society Organization

Several Non-Governmental Organizations accompanied the discussions and workshops of CFMN. Among these organizations and movements, we would like to draw attention to the social movements of the eastern region of the city of São Paulo and the “*Our São Paulo Network*” (“*Rede Nossa São Paulo*”). This features prominently in the local region, together with the Institute for Socioeconomic Studies (Inesc), which, for the last twenty years, has worked on public budgets' transparency and its relation to human rights. Inesc spread CFMN as an example of a data reuse tool to make budget information friendly, along with other examples such as Inesc's tool “*Orçamento ao Seu Alcance*”. CFMN served as an inspiration for that NGO, because it is a tool that provides easy viewing in direct impact level of public policy of the municipality level. This perspective makes the

1 <http://www.criaticidades.com.br/sampacriativa/cuidando-do-meu-bairro-informa-melhor-para-onde-vai-o-seu-dinheiro/>
<http://vilamundo.org.br/2012/08/cuidando-do-meu-bairro-mapeia-obras-publicas-em-sao-paulo/>
<http://www.nossasaopaulo.org.br/portal/node/18198>
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http://www.prefeitura.sp.gov.br/cidade/secretarias/controladoria_geral/noticias/?p=146596

budget more concrete and useful, and helps to work on budgetary information with common, unskilled citizens.

Together with “Caring For My Neighborhood,” Open Knowledge Brazil had a portfolio of open data and budget projects, when it showed the plans for the “*Gastos Abertos*” (“Open Expenditures”) Project, during the Google Impact Challenge², which was designed for a visualization platform of receipts and expenses of the Federal, State and Municipal budgets in São Paulo.

The main outcomes and impacts of CFMN are summarized and visualized in the following impact chain:

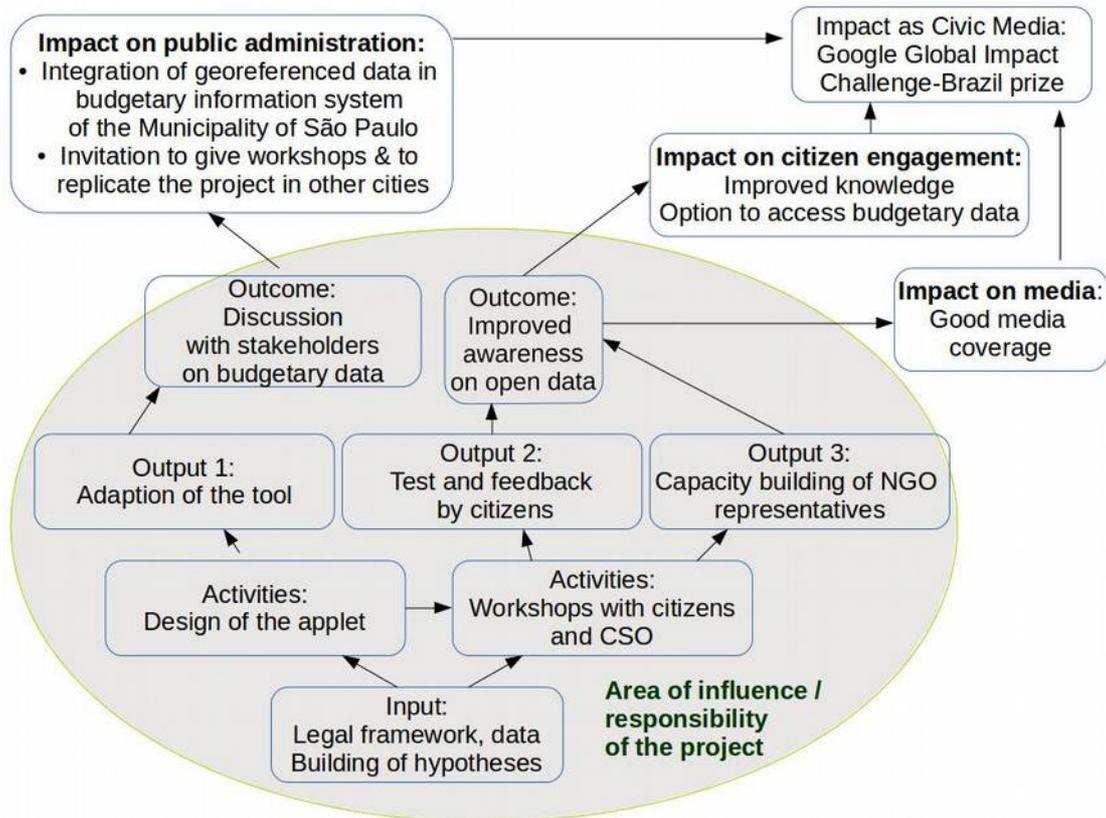


Image 3: Impact chain of CFMN

6.5. Findings on contextual factors

The project outputs and the interviews pointed out some interesting aspects that open up new paths of inquiry. First of all, the civil society ecosystem and the quality of its components and connections may offset the poor quality of the data. Some results showed the importance of having a better understanding of the role of intermediaries and consumers and their social context. In addition to the heterogeneous nature of each category, their role can vary depending on the situation, and disrupt the static character of the active-passive relationship. For a better knowledge of how actions and effects are achieved, it is also important to understand the different stages of how the data, information and knowledge are processed within the interaction between these consumers and intermediaries.

² Another 750 projects carried out by civil society organizations throughout Brazil competed with “*Gastos Abertos*”, and it was a great achievement to be among the ten finalists, and receive further recognition, support from consultants, and the prize of 500,000 Brazilian Reais.

Another key finding was related to the supply side of public sector information, which is represented metaphorically as an iceberg. What is published in the format of open data disguises deeper underlying resource, process, or cultural issues and constraints, which might make the open data initiatives unsustainable. On the other hand, one of the experiences, in real terms, is that often these underlying resource, process, or cultural issues and constraints act as visible barriers and pretexts for a failure to release open data.

The “Caring For My Neighborhood” project has achieved a good deal in its first cycle and lessons have been learned both on the demand side and supply side, and we hope to continue tracking the improvements made in both areas. However, we are conscious that this study has some serious gaps which we hope will be covered in the future; this also includes the fact that our own role in the scenario requires an independent external observer.

7. Conclusions

Although we noted some obstacles that impeded a consistent use of the tool by a significant proportion of our sample, there was unanimity in the positive feedback about the geocoding of public budget and the tool which displayed information on the map of the city. Not only the demand-side actors encouraged further initiatives of the same kind, but they also required that more information be made available in an integrated manner, particularly with regard to the quality of the expenditure and public services supplied.

We could not conclude that a better access to budgetary data can influence the construction of policy agendas within social organizations. We noted that CFMN has rather the role of raising awareness and acting as a learning tool of very complicated issues concerning public budgets. Probably the project needs further development, and it is necessary that citizens – especially the poorest – can have easier access to the Internet. With the growing use of smartphones among the poorest people, it is possible that a version of CFMN in such kind of device will attract more users and more attention from social organizations.

In relation of the Theory of Change, it is also important to draw conclusions on aspects such as contextual conditions, activities and resources that ensure outcomes and impacts. Concerning contextual conditions, we realized that factors like the access to computers and Internet, the education level, and time are influencing the use of the tool. In order to include marginalized populations, it would be therefore very important to work with Civil Society Organizations assuming the function of trainers and interlocutors.

Workshops about the tool and the displayed budgetary data are especially necessary for the segments of society with low educational level. For long-term use, it might be convenient to develop a short handbook about budgetary data for download on the website, to ensure that citizens increase their understanding on the data.

For ensuring the organizational sustainability of the tool, it is important to guarantee periodical upgrading to implement new technological developments, like interactivity of data, and demands and suggestions of users. With such actions, CFMN can contribute to the engagement or empowerment of citizens. That is why the project obtained financial support for new improvements in 2015-2016.

At the moment of the implementation of CFMN, there were very positive political conditions to

dialogue on open data with public administration bodies. Political stability and political interest to promote and open governmental data in appropriate conditions are, however, an important key factor.

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