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Participatory Budgeting as the Instrument of Technologically Supported Dialogue in Cracow, Poland[1]

Urszula K. Zawadzka-Pąk

Faculty of Law
University of Białystok
ul. Mickiewicza 1
Białystok 15-213, Poland
u.zawadzka@uwb.edu.pl

Abstract: Ordinary citizens today support the local decision-making authorities in the domain of public spending using the instrument of participatory budgeting. The situation is of particular interest in Cracow, the second largest city in Poland in terms of the number of residents, as it stands out for its intensive and advanced use of technology. Here, participatory budgeting is a formalized, multi-stage procedure, composed of an information and education campaign, preparation and submission of projects, verification of submitted projects, submission and examination of protests, voting, implementing of projects, and informing about the concluded projects. Using participatory budgeting, the residents communicate their needs and obtain funds to satisfy them. Participatory budgeting covers on average 0.5% of the municipal budget and is decided by 5–7% of Cracow's residents. The research covers the years 2019–2021 and takes into consideration the changes resulting from the SARS-CoV-2 epidemic. The article aims to examine the coexistence of forms of communication, supporting dialogue between residents and local officials in the participatory budgeting process. According to the adopted hypothesis, the two forms of communication used within participatory budgeting—the traditional ones and information and communication technologies (ICTs)—are not separated but are integrated into governance process and reinforce each other. The

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literature, legal provisions, the website on participatory budgeting, media information, social media, and evaluation reports based on qualitative and quantitative methods were analyzed. The results show that the introduction of participatory budgeting resulted in a new type of dialogue and relationship between residents and local officials, based on the traditional tools of communication and ICTs. ICTs cannot replace the traditional forms of communication but their potential should be used to a greater extent. As both forms of communication, direct and indirect (technologically supported), coexist and have their own advantages and limitations, especially under normal, non-epidemic conditions, the two should facilitate and reinforce each other.

Keywords: *communication, crowdsourcing, dialogue, governance, ICTs, internet, participatory budgeting, SARS-CoV-2*

1. Introduction

Today, ordinary citizens all over the world support the decision-making process in different domains, such as improving the quality of sold products (Hoornaert *et al.*, 2017, p. 580), stock predictions in financial markets (Dindo & Massari, 2020, p. 1627), or governmental consultative politics (Coleman & Blumler, 2011, p. 355). These instruments are called 'crowdsourcing' (Howe, 2006) or 'the wisdom of the crowd' (Surowiecki & Silverman, 2007, pp. 190–192). They are fuelled by the explosive growth of Web 2.0 and the social media (Hong *et al.*, 2019, p. 423). Citizens' engagement is considered one of the important dimensions for the development of smart cities (Kisała, 2021), which is a new city model resulting from the rapid development of new technologies and innovation processes (Haltofová, 2018, p. 5).

'The crowd' means small to large groups of people, who frequently make better decisions than the most qualified experts (Surowiecki, 2004). These groups or teams may outperform individuals in making decisions because they bring a wider variety of information, experience, and insight to bear on a problem (Poister & Thomas, 2007, p. 280). Crowdsourcing used in the public sector enables civil servants to work outside the traditional structures and engage citizens in innovative ways such that local issues are resolved without causing much strain on their resources (Haltofová, 2018, p. 5).

The instruments of crowdsourcing are integrated into collaborative governance (Canfield, 2018, p. 994), including participatory budgeting (PB). Since its first implementation in 1989 in Brazilian Porto Alegre, increasing interest in PB has been observed around the world (Dias & Júlio, 2018, p. 20). PB migrated from Latin America to Europe as a result of the activities of various non-governmental organizations (NGOs) and a few international organizations such as the World Bank (Klimovský, Junjan & Nemec, 2021, p. 238). PB means a year-long decision-making process through which residents negotiate among themselves and with local government officials and then vote over the allocation of the local budget (Wampler, 2008, p. 63).

In parallel with the expansion of governance, information and communication technologies (ICTs) have been developed, transforming e-government into e-governance (Friess *et al.*, 2021). ICTs are regarded as a way to reconnect citizens to their representatives (Barros & Sampaio, 2016, p. 294). This is of significant importance as contemporary societies are struggling with "a participation pathology" (i.e., the lack of citizens' conviction that participation can help solve public problems) and with "a representation pathology" (i.e., the citizens' reduced sense of being represented by those they had elected) (Allegretti, 2014, p. 48). The possibilities for civic political participation offered by the digitization process are relevant as it will allow citizens, including minorities, to have digital access to information (Troitiño, 2022, p. 62). Social media may play an undisputed role in these processes (Lehdonvirta *et al.*, 2020, p. 134) as they may be used to help mobilize collective action toward addressing social problems (Porter & Hellsten, 2014). However, the success of ICT's interventions depends on their adequate adaption to the political and technical environment (Breuer *et al.*, 2018) as without an appropriate approach, the residents (the crowd) will lose trust in instruments of online governance (Barros & Sampaio, 2016).

In the context of the current research, this pattern of crowdsourcing means that residents can via PB, supported by ICTs, aid local authorities in the decision-making process on public spending.

The article consists of five chapters. The first presents introductory issues. The second one describes research design. The third chapter evaluates the stages of PB as the instruments of technologically supported dialogue. Subsequently, the fourth chapter discusses the coexistence of direct and technologically supported dialogue within PB procedure. Finally, the conclusion points out possible ameliorations in the current practice of PB process.

2. Research design

There is a small group of countries, comprising the Dominican Republic, Indonesia, Peru, South Korea and Poland, with central legal regulation of PB (Allegretti & Copello, 2018, p. 31). Although complete comparative data are lacking, Poland is probably the country where PB has developed on the widest scale in the whole of Europe (Sintomer, Herzberg & Röcke, 2016, p. 23; Zawadzka-Pąk & Tomášková, 2019, p. 167). In Poland, a specific plebiscite PB model was developed based on the written submission of projects' proposals and voting (Zawadzka-Pąk, 2021, pp. 146–147).

In Poland, the central parliament, seeing the down-up movement of PB implementation, legally regulated PB in 2018, amended the Act on Municipal Self-Government of March 8, 1990, which currently contains the legal definition of PB and provisions regulating the PB procedure. PB stands for a special form of public consultations that allows the residents to decide each year on a part of the city's budget expenditure by direct voting. This Act obliged the municipalities with the departments' rights (in practice, the largest cities) to implement PB and to allocate for this purpose at least 0.5% of municipal expenditure. The general central statutory legal framework is further detailed by the local provisions issued by the municipal councils or by the local executive body (mayors). In the case of Cracow, in the analyzed period, three consecutive resolutions regulated PB.[2] These legal acts do not differ much; the PB stages are the same (cf. Chapter 3 below). As the SARS-CoV-2 epidemic has continued, small modifications of previously binding deadlines were introduced.

Even if the PB procedure in Polish cities is comparable, the situation is of particular interest in Cracow, the second largest city in Poland in terms of the number of residents. This city stands out for its intensive and advanced use of technology in the PB process. The city of Cracow is formally divided into 18 districts. Accordingly, apart from the city's authorities, that is, the city council (decision-making body) and the mayor (the executive body), also the district authorities, that is, the district councils and the district boards, are responsible for PB. As a result, the PB procedure is organized not only at the municipal level but also at the district level. Thus, the PB projects may be city- or district-wide. The amount of expenses allocated in Cracow

[2] Resolution no. XI/179/19 of the City Council of Cracow of March 13, 2019; Resolution no. XXXV/903/20 of February 12, 2020; Resolution no. LI/1410/21 of the City Council of January 13, 2021.

per year is, in principle, comparable to other Polish cities, and constitutes about 0.5% of the city budget expenditure.

In Cracow, the PB procedure, direct and indirect (technologically supported) tools of communication are used. While technologically supported participation has the potential to open up governance structures and provide a venue for meaningful interaction, it also requires careful design considerations (Schulz & Newig, 2015, p. 55). A properly formed PB procedure should be based on solid axiological (ethical) grounds, including openness (Rossmann & Shanahan, 2012), democracy and transparency (Brun-Martos & Lapsley, 2017), accountability (Zawadzka-Pąk, 2021), trust and legitimacy (Swaner, 2017; Lotko, 2019), equality and representativeness (Fischer, 2012), civic engagement (He, 2011), and truth (Zawadzka-Pąk, 2022). Also dialogue, as one of the public values (Jørgensen & Bozeman, 2007, pp. 377–378), is crucial for the effectiveness of the PB process, although little attention has been paid to this value in the literature.

Thus, the article aims to examine the coexistence of the forms of communication that support dialogue between residents and local officials in the PB process. The specific research objectives concern an analysis of this coexistence at particular stages of PB, that is, an information and education campaign, preparation and submission of projects, verification of submitted projects, submission and examination of protests, voting, implementation of projects, and informing about the executed projects. According to the adopted hypothesis, the two forms of communication used within the PB procedure, that is, the traditional ones and the ICT's, are not separated but are integrated into the governance process and reinforce each other.

The research questions of the article are as follows. First, what are the methods, tools and instruments of direct and indirect dialogue (technologically supported) that the stakeholders of PB procedure (residents, local civil servants, local councilors) have at their disposal? Second, how effective are these tools in supporting the crowdsourcing in the PB process? Third, what are the possible ameliorations in the current practice of PB process, regarding the tools of indirect and direct dialogue? Fourth, whether and, if so, how are these tools of dialogue integrated into the traditional mechanism of representative democracy (elections)?

The context matters here. The global outbreak of the SARS-CoV-2 epidemic is an unprecedented crisis that severely affects not only public health and the economy but also poses a challenge to governance mechanisms (Zahry,

McCluskey & Ling, 2022). Especially in the event of an epidemic, the use of ICTs has the potential to support public dialogue as the traditional forms needed to be restricted. Thus, the SARS-CoV-2 epidemic, which started in 2020, is a good opportunity to investigate how the use of ICTs has been intensified in the PB process. Hence, the research covers the years 2019–2021.

The research is based on a complex desk-research method. First, the literature, legal provisions regulating the PB procedure, the PB website, media information, and social media were analyzed. Subsequently, the evaluation reports based on the qualitative and quantitative methods from three PB editions were studied. These reports were commissioned by the city of Cracow and executed by independent laboratories of sociological research. For the preparation of these reports, three PB stakeholders (residents, local civil servants, and local councilors) were examined, using participant observations, telephone interviews, individual interviews, focus groups, and online surveys (Chrzanowski & Kryglon, 2019, pp. 5–6; Skrzypiec & Wójkowski, 2020, pp. 6–8; Wójkowski, 2021, p. 4).

3. Stages of participatory budgeting

3.1 Information and education campaign

An information and education campaign is a specific stage of PB procedure as it is carried out continuously throughout the whole year.

On the one hand, residents are informed about the idea of PB and the possibility of submitting projects using traditional methods, such as posters, billboards, leaflets, city and district events, direct conversation with district councilors, friends and family members, and district council information magazines. On the other hand, information can be found on advertising boards in vending machines for selling public transport tickets and in cash machines. In turn, social media and websites are used as online sources, publishing information posts, broadcasting press conferences and information films, and publishing banners on websites redirecting to the PB website (Chrzanowski & Kryglon, 2019, pp. 19–24; Skrzypiec & Wójkowski, 2020, pp. 22–23; Wójkowski, 2021, pp. 7–9). Regarding campaigns on Facebook, this social medium is primarily used for one-way communication, mainly to post information. Even if there are some comments or questions (e.g., about extending the deadline for delivering lists of support or publishing

broadcasts of PB webinars), responses to them are rare (Wójkowski, 2021, p. 8). Similarly, the PB Instagram profile is mainly used to encourage people to submit a project or participate in voting. Moreover, the special role is entrusted to the "local participation ambassadors"—residents involved in the promotion of PB in the districts they live in.

Before the epidemic, the city hall organized consultation meetings with residents in a traditional form. The objective of these meetings was to inform about the essence of PB, inspire to develop a good project, discuss the residents' needs, and identify their common needs. In 2019, 53 such meetings were organized. Unfortunately, however, only about an average of ten people participated in them and sometimes not a single resident came to such a meeting (Chrzanowski & Kryglon, 2019, p. 23). During the epidemic, that is, in the years 2020–2021, traditional meetings were abandoned. In 2020, no meetings took place. In 2021, eight webinars were organized via MS Teams, open to every interested resident. During the meetings, the practitioners talked about how to write a project and what are the legal requirements. Examples of projects implemented with PB were also discussed. The city authorities did not provide information on the number of participants in these webinars. However, the conducted interviews suggest that this form of communication did not attract much attention. Moreover, there was no discussion at these meetings (Wójkowski, 2021, pp. 14–16).

3.2 Preparation and submission of projects

At the stage of preparation and submission of the projects, communication between officials and residents takes place in four ways, requiring both traditional and technologically supported contacts.

First, submitting projects is the basic, formalized way of dialogue. The residents communicate their needs that so far have not been met by public funds. PB not only draws attention to the problems but also allows obtaining funds to solve them. Proposals are submitted only via an online platform, whereas the lists with 15 signatures supporting the project should be submitted in the traditional paper format. Second, communication takes place through "marathons" of writing PB projects. At these meetings, residents get help from officials in describing the project. In 2019, five such meetings took place. During the epidemic, this form of communication was abandoned and not replaced by any form of electronic communication. Third, communication takes place through telephone contacts. The time spent on discussion and assistance in preparing a project makes up for the fact that

later there are greater chances of positive verification. Although both officials and residents positively assess this form of communication, unfortunately not many applicants use it (Wójkowski, 2021, p. 14). Fourth, communication takes place through an interactive map of ownership of lands belonging to the city, where PB projects potentially can be implemented. It is only a tool, albeit a useful one, as the feasibility of implementing projects on the selected plots will be checked during the verification.

3.3 Verification of submitted projects

Verification of projects consists in checking whether the PB proposal meets the formal requirements, its legal feasibility, and its cost estimate. In 2019, the total of 57% of the submitted PB proposals were positively verified, in 2020—56%, and in 2021—53% (Wójkowski, 2021, p. 28).

Even though this stage is formally referred to as "verification", it is, in fact, often the stage where also the modification of the projects takes place. This is because the verification of projects is carried out by officials themselves, although they can communicate with applicants by phone and email. Officials help to adapt the project to legal regulations, suggesting changes to the location, scope of material, cost estimate, or schedule. Both residents and project reviewers appreciate this communication (Skrzypiec & Wójkowski, 2020, p. 46).

As a result of the verification, the projects are classified as "accepted" or "rejected". A rejection of a project requires justification of the legal basis. The results of the verification are published on the PB website in pdf format.

3.4 Submission and examination of protests

Protests against a negative verification can only be submitted via the online platform. An applicant who does not agree with the decision logs into his account, justifies the protest, and sends it. In 2019, the share of applicants who lodged protests was 29%, in 2020—27%, and in 2021—32%. The effectiveness of protests in 2019 totaled 21%, in 2020—25%, and in 2021—39% (Wójkowski, 2021, p. 30).

Both the submission of a protest and its examination are forms of communication, although different ones. During resident protests, the residents unilaterally communicate, using ICTs, their opposition to the rejection of the project. Once the protests are submitted, they are discussed

at the meeting of the Participatory Budgeting Council, composed of city activists, applicants, city councilors, as well as representatives of district councils and boards. The applicants and officials may also participate in the meetings of the Council. Since 2021, online participation in meetings of the Council is accepted.

3.5 Voting

Residents can vote using a dedicated online platform or on paper ballots at polling stations. Voting lasts for 10 days. In the analyzed period, 70% of voters on average voted online (Wójkowski, 2021, p. 34). In 2020, 17% of the paper ballots were declared invalid, whereas only 0.2% of electronic votes were invalid (Skrzypiec & Wójkowski, 2020, p. 50). This is one of the arguments against paper ballots, however, the possibility of choice results in a higher turnout, especially among seniors and schoolchildren.

Information about voting can be found both in public spaces (billboards, posters in buses) and on social media. However, residents assess promotional campaigns as insufficient. As one of the residents stated, "I think PB is not properly promoted. Most of the time, the people who vote are interested in the topic, and the promotion campaign does not reach many people who are not socially active" (Skrzypiec & Wójkowski, 2020, p. 47). This is confirmed by statistics. Changes in attendance are not radical and can be explained only to a small extent by the epidemiological situation. This is because the share of residents in the vote has stabilized at the level of 5–7% (Skrzypiec & Wójkowski, 2020, p. 49). The results of voting are presented on the PB website, additionally, the city hall organizes press conferences broadcasted on the internet.

3.6 Implementation of projects and informing about concluded projects

Projects selected in the vote receive funding from the city budget for the next financial year. These are carried out by city's administrative units or are outsourced to external entities.

It seems that informing about implemented projects would not be possible without the ICT support. First, on the city's PB website, there is an interactive map of Cracow with projects in progress, with a description. City-wide and district projects are presented separately. However, the status of the work is not updated. Second, the city's PB website also publishes

the tables in pdf format, informing about whether a given project has been implemented, what stage the work is at, and possibly whether the project may have been abandoned. These data are updated, albeit at different intervals. Third, information on a few, randomly selected projects being implemented or completed can be found on Facebook. Some posts directly encourage residents to take advantage of PB projects, for example, to sign up for art classes or use the playground. Unfortunately, few comments are published. The PB Instagram profile is not used to publish posts informing about the completed projects.

4. Coexistence of direct and technologically supported dialogue within the participatory budgeting procedure

The introduction of PB resulted in the creation of a specific type of dialogue and relationship between residents and local officials based on the traditional tools of communication and ICTs. PB is a formalized, multi-stage procedure, the result of which is expenditure from the city's budget (on average 0.5% of this budget), inspired and decided by the residents participating in the PB procedure. The communication focuses on projects involving investments (e.g., cycle tracks, parks) or services (e.g., training, events). Thus, this dialogue has a measurable impact. Technologically supported dialogue via PB existed even before the outbreak of the epidemic (in the form of online voting, social media, and interactive maps). However, this procedure evolved with the epidemic, as additional forms of online dialogue were introduced, in particular webinars, and the possibility of online participation in meetings of the PB Council.

Although, initially, PB in Poland was not shaped by the conditions of the SARS-CoV-2 epidemic that made personal contacts difficult, it assumes depersonalization of contacts, as decisions are taken by impersonal voting on individually prepared projects. For a small group of residents (applicants) who want to consult with local officials while preparing a project, PB creates conditions for a closer dialogue. Moreover, the local officials have the opportunity to initiate a discussion of the project during the stage of verification. However, these contacts require a direct conversation, either in person or by telephone, if need be by email, and cannot be replaced by ways of communication provided by social media.

The functioning of PB is only partially regulated by central and local legal provisions, and decisions on the practical issues of using ICTs to inform about PB and the implemented projects (the scope of information posted on websites and on social media, organization of webinars) are made by local officials themselves. Unfortunately, in practice, these decisions result in superficial communication. In the case of Cracow, webinars and posts are rather an instrument of a one-way dialogue, as they do not contribute to the discussion, even if online communication channels (MS Teams, Facebook) allow two-way communication. Webinars and posts are not a substitute for face-to-face meetings, such as "marathons" of writing PB projects. This is because, in practice, there are barriers that prevent two-way communication, such as the anonymity of the participants and the lack of social bonds.

On the other hand, posts on social media, even those left uncommented, have the potential to present the implemented projects to a large audience and may become a motivating factor for residents to become more directly involved in PB, that is, as an applicant. Analogously, online interactive maps of implemented projects enrich the traditional channels of communication such as billboards, posters, radio, and television. The effect of mutual complementarities of traditional forms of communication and ICTs can be also observed in voting methods. Despite technological progress, some age groups of voters still prefer traditional paper ballot voting. Another example is the examination of protests. They are submitted using ICTs but are processed in the form of a traditional meeting; however, online participation is also accepted.

5. Conclusion

Participatory budgeting makes residents empowered by involving them in the city's decision-making, including decisions on the allocation of public money and on designing ways to meet the needs of the city's community. This procedure allows residents to publicly communicate what is missing or neglected in the city, or even blocked by the local authorities. Sometimes, PB is the only way to implement tasks that are not financed from the city budget in the normal procedure.

Despite the advantages of PB, instruments of direct and indirect communication within the PB process should be used carefully and consciously. In particular, ICT cannot replace the traditional forms of

communication but their potential should be used to a greater extent. As both forms of communication, direct and indirect (technologically supported), coexist and have their advantages and limitations, especially in normal, non-epidemic conditions, the two of them should facilitate and reinforce each other. This requires some ameliorations in the current practice of the PB process, regarding the tools of indirect and direct dialogue.

Starting with the indirect dialogue, let us note that, first, the improvements should concern the use of social media. This implies not only more posts but also communication via comments on posts moderated by local officials and social activists, especially "local participation ambassadors". This is because there is a large group of residents who will not come voluntarily to a promotional meeting about PB. Nowadays, the only way to convince them to vote is through the internet, especially social media. Second, the potential of interactive maps should be better exploited through updating information on completed projects on an ongoing basis and attaching photos of completed projects. Third, the number of webinar's recipients should be enhanced by the broadcasting of webinars on the internet not only in real time but also after their end. Moreover, the leaders of webinars should encourage the participants to express their views on the needs of local communities and ask questions. Four, even if the two voting methods, traditional and electronic, are maintained, the residents should be encouraged, in particular during personal meetings, via social media, radio and television campaigns, to try to vote electronically, as there are far fewer errors with this voting method.

Moving on to discuss the two recommendations about direct dialogue, let us first note that once the pandemic is coming to an end, the traditional in-person information and educational meetings should be resumed. Residents should be invited to take part in them using promotional campaigns, social media, and social activists, because there is a need for more options for in-depth face-to-face discussions on the public needs. This is required to eliminate the risk of financing tasks that would imply wasting of public money, for example, an excessive number of flowerbeds. Residents, especially during project-writing "marathons", should have the opportunity to discuss their ideas for the implementation of public tasks and receive reliable information on the methods of their implementation. Second, non-governmental organizations and social activists should be vigilant that local officials do not discourage residents during the verification of projects, from submitting projects that are useful from the residents' point of view but inconvenient for the officials, for example, anti-smog boards informing about the level of air pollution in the city.

To sum up, the knowledge of the residents (the crowd) is a precious source of information in the process of the effective fulfilling of public tasks. On the other hand, given the fact that the turnout in voting on projects does not exceed 7% of Cracow's residents, the projects selected under the PB procedure may not be representative of the general population, and organized groups may capture the process to serve their interests (OECD, 2019, p. 28). This is because the instruments of governance are not only integrated into indirect democracy but are outside the sphere of control of traditional democratic processes (Peeters, 2012, p. 49). For comparison, let us note that the turnout in the 2018 local government elections in Poland was 54%. To reduce the risk of abusing crowdsourcing in the scope of PB, the turnout in voting should be, if not comparable to the local government elections, at least significantly higher than currently. If the level of turnout in PB does not exceed at least 30%, the risk of capturing the PB process to serve the interests of organized groups is high. The way to reduce the risk is to follow the recommendations presented in this article. To this aim, as mentioned above, social media (Facebook and Instagram) and webinars should reach more recipients and be used for the purpose of a two-way dialogue. In this case, more residents would be involved in the PB procedure (in particular, submitting the projects and voting), and in consequence the risk of using PB to serve the interests of a small but organized group of residents would be reduced.

Urszula K. Zawadzka-Pąk, Dr. habil. in law, graduated from the University of Białystok, the University of Warsaw and Paris 1 University, works at the Department of Public Finance and Financial Law of the Faculty of Law, University of Białystok, Poland. She is vice-president of the International Center of Public Finance and Tax Law Research (www.centerofffinance.org). Zawadzka-Pąk has authored around a hundred publications on budgetary law, public management, participatory budgeting and axiology of law. More information can be found at www.uzawadzka.org.

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