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List of abbreviations

BSR	Baltic Sea Region
DE	Germany
FI	Finland
EmPaci	Empowering Participatory Budgeting in the Baltic Sea Region
KPI	Key performance indicator
LT	Lithuania
LV	Latvia
NGO	Non-governmental organisation
PB	Participatory budgeting
PL	Poland
RU	Russia

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1 Document summary

This document contains measures to evaluate participatory budgeting (PB) processes. The proposed evaluation system is based on a literature review as well as on experiences and ideas from the practitioners of the pilot municipalities (DE, FI, LT, PL, 2 in LV, 3 in RU) of the EmPaci project. In order to reflect on the pilot partners' experiences during their PB pilots, a brainstorming meeting among the partners of project to add potential indicators.

2 Introduction

Evaluation of participatory budgeting is an emerging field as PB processes are emerging everywhere. There are two core problems regarding the evaluation of PB processes. The first problem is the various goals of PB processes. Whereas the general goal is to involve as many citizens as possible, further goals will differ. Possible goals could be (1) increased innovative ideas by the citizens, (2) activation of minority groups of citizens, (3) an efficient PB process with no delays or building (4) enhanced trust and (5) satisfaction of citizens (Jabola-Carolus et al. 2020; Cabannes 2004; Franklin et al. 2009; Mok 2020; Ruesch and Wagner 2014). Depending on such different goals, the evaluation of the PB process has to be adjusted. This leads to different key performance indicators (KPI) for the assessment of success of the underlying PB process. To define such goals is often the first hurdle to overcome. Municipalities have to realize, what they really try to accomplish. It has to be clear, what will be measured. Subsequently, in the next step the relation between cause and effect might be not be entirely known (Schneider 2018). It is relatively easy to collect data like participations rates etc. But to reach for higher goals or outcomes of the PB processes, the cause/effect relationships are often hidden. For instance, building trust appears to be a complex goal, where not all influencing factors are known (Rosener 1978). Therefore, assessments of PB processes for such goals is challenging, but somehow still necessary to inform about the success and effects of PB processes in the long run.

The second problem is the variation of the PB processes, which are organized in different phases. The PB processes differ between municipalities based on contingency factors like the legal framework, social or cultural preferences of citizens (Sintomer et al. 2010; Wampler and Gilman 2019). For instance, if there is no voting phase due to legal restrictions or missing statutes, naturally the number of voters cannot be used as an indicator. But if this PB process has a proposal phase, the number of submitted proposals would represent a KPI. These local differences, which

on an international level are even larger, hamper the transmission of general evaluation models. As for the PB process design also for PB process evaluation, the motto is: “no one fits all”. Based on that realisation, this document aims to present an evaluation scheme that can be adjusted to the individual goals and process phases. To tackle the above mentioned problems of evaluating PB processes, first a structured literature review (SLR) is performed to identify theoretical goals and indicators of PB processes (section 3.1). In addition, to add a more practical view on evaluation, an EmPaci partner workshop was held exclusively on evaluation. In this brainstorm workshop, ideas of goals and indicators were collected among the partners (section 3.2). By working through the whole collected material, indicators were assigned to goals and form the “sets” for the later evaluation scheme (section 3.3). The first set with the sub-goal to get a PB process started is the “basic set” (section 4). It captures the general information, e.g. the number of proposals, participants or the amount of budget that was used. Besides this “basic set” of indicators, depending on the identified sub-goals of the PB process, eight other sets with different sub-goals are presented (section 5). For each set, the related indicators were assigned to the process phases:

- (re-) design phase,
- proposal phase,
- voting phase and
- implementation phase.

By picking the set(s) that fit(s) the municipality’s goals, the PB evaluation scheme in its entirety is adaptable to the individual PB process upon different sub-goals and providing indicators per process phase (section 6). In total, the full PB evaluation scheme provides over 80 possible indicators to track, develop and evaluate PB processes based on the underlying sub-goals of the PB process. Also, assessment of KPI’s can be done in time comparison and in a benchmarking circle.

3 Literature review and partner input on PB evaluation and sets for evaluation

3.1 Results of the structured literature review

Two structured literature reviews (SLR) were conducted to get an overview of potential goals and indicators of PB. For goals and indicators three search words were generated as follows: For the goals: PB AND goals OR targets OR objectives, and for the indicators PB AND evaluation OR

measures OR indicators. The first 40 entries of the Google Scholar search engine were checked for each of the six search word. It includes academic research articles as well as working papers and conference submissions. The articles were taken into account if the text was: not already in the sample (no double hits), available, in English and corresponds to the subject area. From the potential database of 240 articles, 106 articles were left for further examination.¹

3.1.1 Possible goals of PB processes

From the 106 exploitable articles, 39 included phrases regarding goals of PB. A number of 140 phrased goals were identified. These coded phrases have been grouped into four different main categories of goals. The Table 1 below shows the results:

Citizen-related		Municipality-related	
Individual goals	Society goals	Administration goals	Legitimacy goals
Knowledge	Equity	Financial goals	Accountability
Expand civic engagement (engaging, and empowering)	Openness	Efficient resource allocation	Transparency
Develop new community leaders	Inclusiveness	Economic growth*	Enhancing the quality of democracy
	Community building / generate social bonds*	Debt reduction*	Two-way communication
	Democratize governance / public involvement*	Low-income citizens and neighbourhoods receive greater levels of public spending	Enhancing trust
	Make public budgets more equitable	Process goals	Increase democracy
	Build power among politically marginalized groups*	Joint management of public resources	Reducing corruption
	Social justice / fair outcomes* / Solidarity*	Determine the priorities of the city through citizen participation	Strengthening of local democratic processes
	Good governance*	Modernisation by participation*	Acceptance
	Deliberation in the budgetary process	Efficient management of public resources*	
	New channels for public participation for poor and disenfranchised communities	Citizens take part in the budget decisions / representative decision-making* / involving citizens in the process*	
	Gender equity	Improve administrative efficiency	
	Enhance social equality / reduce inequality	Gaining support from citizens	
	Improve neighbourhood	Service delivery goals	
	Dialogue on budget decisions	Improved short-term service delivery	
	Increased connectivity	Responsiveness	
	Strengthen democracy	Improving state performance	
	Democratization of local institutional powers* / community empowerment*	Investing in areas of greatest need	
	Participative decision-making		
	Participative policy development		
	Influence on the prioritization		

* = later excluded from the synopsis, because of other overlapping goals

Table 1: Goals from the SLR

3.1.2 Possible indicators

The SLR on the indicators led to fewer findings, because academic research articles are more abstract in the sense that no complete schemes are presented. From 106 articles in the complete

¹ A full list of the articles is presented in the Appendix.

analysis, 23 texts include 58 phrases or tables that carry some kind of indicators or numbers in connection with PB respectively its evaluation. These 58 text segments contained or described 69 potential indicators. Four main categories were created for the indicators. Table 2 shows the identified indicators:

Financial KPI	Social KPI	Feedback KPI	Organisational KPI
PB budget in % of investment resources	# of participants	Do citizens feel represented (positive or negative comments)	PB board composition
Resources per inhabitant	Categories of funded projects	Perceived impact	Efforts for administration (costs/time)
Cost for PB process	# of participants	Perceived political awareness	Projects accepted
% of money spent on works executed through PB per inhabitant	# of innovative proposals	Perceived communal trust	Projects submitted
% of municipal budget spend on works executed through PB*	Human Development Index (HDI)**	Perceived scepticism	% of works carried out using PB
Amount of money spent on works executed through PB per inhabitant	Voters turnout (# of votes, participation rate)	Perceived clientelism	# of proposals
Expenditures spent per areas	Degree of deliberation (# of posts per person, availability of internet access, posts per day, rate of respect, themes and critique rated in comments)	Channels of activation (feedback)	# of feasible proposals / % of feasible proposals
Budget efficiency (% of works carried out using PB x (100) x (Budget by PB/Cost of works))	Expenditures spent per area	Perceived satisfaction	Elected mayor/Elected council
% executed budget from planned budget	% of women councillors in local authorities	Perceived performance of administration officials	Public forums (held)
Proportion of total income actually collected (incl. taxes)*	Voter turnout and voter participation by sex	Perceived individual education/knowledge related to the budget process	Anti-corruption commission
	Public forums (held)		Facility for citizen complaints (# of complaints through PB)
	Civic Associations per XX,XXX population		

* = later excluded from the synopsis, because of other overlapping indicators

** = A measure of a country's level of development and is made up of three components: Life expectancy, education and purchasing power.

Table 2: Indicators from the SLR

One examined article investigates multiple practical schemes for evaluation (Karachay/Chugunov/Neustroeva, 2020). These schemes were analysed in a separate category system to add practical thoughts to the more theoretical academic sources in the following Table 3.

Financial KPI	Social KPI	Feedback KPI	Organisational KPI
Allocation of PB funds by project type (to be compared with the allocation of comparable funds prior to PB).	# of PB participants and % of eligible residents who participate	# and % of participants who report prior civic engagement or participation	# of people involved at different phases of the PB process
Amount and % of funds allocated to PB projects	# and % of participants who are of low SES and/or people of colour; and relative to demographics in jurisdiction and most recent local election	# and % of participants who report being new or returning to PB	# of assemblies and other idea collection events, online idea collection, outreach methods; # and type of budget delegate committees; # of reg. voting sites, # of mobile voting locations, online voting, outreach methods
Project completion rates and final project costs.	Positive/negative votes/supports	How did you first hear about today's [event/vote]	Project completion rates and final project costs.
Amount of additional money allocated to projects and needs identified through PB.	# of nongovernmental and community-based organizations involved in PB.	# and % of PB voters who are eligible to vote but did not vote in the most recent local election.	Amount spent on PB implementation
Amount spent on PB implementation	# of proposers	# and % of PB voters who are ineligible to vote in local elections.	Total public sector cost per resident participating in PB
	# of proposals	Perceived outcomes	# of nongovernmental and community-based organizations involved in PB.
	Page views (online)		# of new, continued and discontinued PB processes from year to year.
	Unique visits (online)		Average visit duration (online)
	# of actives (at least propose or vote, online)		Total public sector cost per head of population
# and % of elected officials re-elected			
* = excluded from the synopsis, because of other overlapping indicators with the previous SLR			

Table 3: Indicators from the practical schemes mentioned in the SLR

3.2 Goals and evaluation indicators for PB from the partner brainstorm meeting

In addition to the SLR, a special workshop with the members of the EmPaci was held. In this workshop, goals and indicators from citizens' and officials' view were collected to meet the identified categories of citizen-related and municipality-related goals from the literature review.

The first round discussing the topic of goals for PB resulted in the following Table 4:

Citizen-related		Municipality-related	
Individual goals	Society goals	Administration goals	Legitimacy goals
Feels empowered	Hold politicians accountable	Financial goals	City image
To know more on how the decisions are made in administration	Inclusiveness of minority groups	Spend money more efficiently*	Increased trust*
Self-realization	Increased well-being	Efficient resource allocation*	Increased understanding*
Suggest new ideas that the municipality is not aware of	A fun tool	Process goals	
Desire to try a new interaction tool	Another nice event in the city	Initiating dialogue for conflict reduction*	
Check if I really will be heard	Communicate own needs to the municipality leadership	Citizens as co-workers	
Easy access	As many people as possible*	Sharing responsibilities	
Easy and fast way to communicate needs*		Compliance with requirements of the federal leadership to involve residents	
		Service delivery goals	
		Reassurance for municipalities/politicians on what citizens want*	
		Improved infrastructure / improved services	
		New ideas to invest*	
		Gain information	
		More information for municipalities from citizens*	

* = later excluded from the synopsis, because of other overlapping goals from the SLR

* = later excluded from the synopsis, because of other overlapping goals from the SLR

Table 4: Goals from the partner brainstorm meeting

The second round of discussion delivered ideas on potential indicators for the PB evaluation. Many indicators were already mentioned in the SLR, but nonetheless there are indicators that were mentioned and not present in the analysed literature. Therefore, Table 5 shows the results of the brainstorm workshop on indicators.

Financial KPI	Social KPI	Feedback KPI	Organisational KPI	
% of budget meeting citizens needs*	# of possible participants	# of citizens that noticed the PB process	# of proposals*	
Growth of budget revenue**	% of participating electorate*	Drop off locations in process	# of votes online/offline	
Process cost per idea processing*	# of suggested ideas*	Reasons for contact with PB*	Electoral support level	
Cost per processing stage (proposal, feasibility, discussion etc.)*	Comment rate on proposals	# of clicks, likes, page impressions / social media visibility	% of completed projects proposed by citizens*	
	# of proposals from youth*	When do citizens vote? Point of contract (marketing)*	Time of a proposal per process stage	
	Balance of proposals per sub-groups of citizens*	Process evaluation to promote it being see-through and reliable*	% of feasible proposals*	
		Distribution of proposal topics*	Increased knowledge of governmental processes*	Time from proposal to realization
		Balance of proposals from different areas*	% of citizens that improve their quality of life as a result of PB	Correspondence of PB proposals to official priorities
	Links with NGOs*	# of citizens that are intermediated by NGOs*	# of positive report on the media	
		Perceived satisfaction (possible per area: communication, process phases etc.)*	Links with NGOs*	
		Increased interest from other municipalities/ administrators	# of related conferences/events	
		Trackable links to see, where citizens come from (online)	Development of city brand*	
		# of complaints compared to the situation without PB	Long-term communication of implemented projects	
			# of good practices promoted within the municipality*	

* = later excluded from the synopsis, because of other overlapping indicators from the SLR

** = Not applicable to all municipalities, as the tax autonomy is limited at the municipal level.

Table 5: Indicators from the partner brainstorm meeting

There might be overarching goals for PB processes, but the more detailed the description of goals will be, the more the focus will differ. Based on the discussions in the brainstorm workshop, it was evident, that the view on goals differs in some cases (e.g. targeting as many citizens as possible vs. targeting specific citizen groups (inclusiveness)). Following on from this, not all goals go in the same direction, but might even compete (cost efficiency vs. improved infrastructure/communication). To separate the different goals, sub-goals are formulated. These different sub-goals will have their own evaluation set, resulting in different collections of goal-dependent indicators. As a result, the PB evaluation scheme will not consist of one big collection of possible indicators but will be divided in different sets aiming different sub-goals, that carry their own indicators. Practitioners can choose from the different set corresponding to their sub-goals for their own PB process.

3.3 Generating sets for the PB evaluation scheme

The results from the SLR as well as the ideas from the brainstorm workshop among the partners were jointly put together in a synopsis. By analysing the different goals and indicators, ten different sets of sub-goals were created (see left column of Table 7). The identified goals and indicators were assigned to the sub-goal sets. This synopsis is the starting point for the development of the evaluation scheme. All sets for evaluation are based on their sub-goal sets and the identified indicators. By working through the sets, additional indicators were added. In the Table 7, the goals and indicators retrieved through the SLR are shown in blue letters, whereas those added from the brainstorm workshop with EmPaci partners are shown in orange letters.

PB evaluation sets	Indicative phrase
Basic set:	"Get a PB process started"
Advanced sets:	
Proposal quality	"Record quality of ideas"
Innovation:	"New ideas for community life"
Feedback & Monitoring:	"What people know about the PB and what do they think about the municipality"
Process delay:	"Fast implementation of as many ideas as possible"
Online:	"Get an online platform going"
Cost-efficiency:	"Recognize the costs of the PB process"
Co-creation:	Developing ideas together with the citizens"
Inclusiveness:	"Reaching disadvantage citizens"
Others:	„Further contributions“

Table 6: Created PB sub-goals based on indicative phrases

The last set with "further contributions" (see last line Table 7) functions as an "Others" category. Most of the assigned indicators are related to the situation before and after PB, which are hard to collect, as initially the indicators have to be collected before PB is introduced to allow for a comparison. Additionally, some of the indicators will only change over a long period of time (e.g. the number of re-elected officials will only change after a legislative period). Even if the data is available, it is doubtful to say, that PB affected these changes (e.g. % of women as councillors, or HDI indices). Nonetheless, these indicators might be helpful for practical users and are used in academic literature. To be as concise as possible, this category will be left out at the final evaluation scheme, as this is not a specific sub-goal but more a gathering of indicators on different topics.

PB Sub-goals	Goals from the SLR					Indicators from the SLR					
“Get a PB process started”	Expand Civic Engagement (empowering) / Comm. own needs to the municipality	Strengthen democracy / enhancing the quality of democracy / Feels empowered	Participative decision-making / influence on the prioritization / citizens take part in the budget decisions	Determine the priorities of the city through citizen participation	Check if I really will be heard / Citizens desire to try a new interaction tool	# of proposers / voters turnout (# of votes, participation rate)	# of proposals	Positive/negative votes/supports	# of PB participants and % of eligible residents who participate / # of possible participants	Amount and % of funds allocated to PB projects / % executed budget from planned budget	Resources per inhabitant / amount spent on PB implementation
“Record quality of ideas”	Community building	Correspondence of PB proposals to official priorities				Continued and discontinued PB processes (proposals)	# of feasible proposals / % of feasible proposals	Projects feasible / Projects submitted			
“New ideas for community life”	Develop New Community Leaders	Investing in areas of greatest need	Citizens suggest new ideas that the municipality is not aware of	Self-realization of citizens	Sharing responsibilities	# of new PB processes (proposals)	# of innovative proposals				
“What people know about the PB and what do they think about the municipality”	Knowledge / Gaining support from citizens / Gain information	Responsiveness	Acceptance	Enhancing trust	Accountability	# of assemblies and other idea collection events / Public forums / Channels of activation (e.g. NGOs) / # of citizens that noticed the PB process	# and % of participants who report prior civic engagement or participation / # and % of participants being new or returning to PB	Perceived awareness / Satisfaction / trust / scepticism / clientelism / knowledge / performance of administration / impact / outcomes	Facility for citizen complaints (# of complaints through PB)	Drop off locations in process	# of positive report on the media
“Fast implementation of as many ideas as possible”	Joint management of public resources	Improved short-term service delivery	Hold politicians accountable			Project completion rates and final project costs.	% of works carried out using PB	Long-term comm. of implemented projects			
“Get an online platform going”	New channels for public participation for poor and disenfranchised communities / deliberation in the budgetary process	Increased connectivity	Two-way communication	Responsiveness	Openness / Easy access	# of votes online/offline	Unique visits (online) / Page views (online) / Average visit duration (online) / # of clicks, likes, page impressions / social media visibility	# of actives (at least propose or vote, online)	Do citizens feel represented (positive or negative comments) / Comment rate on proposals	Degree of deliberation (# of Posts per person, availability of internet access, posts per day, rate of respect, critique in comments)	Trackable links to see, where citizens come from (online)
“Recognize the costs of the PB process”	Efficient resource allocation	Improving state performance				Amount of additional money allocated to projects and needs identified through PB.	Project completion rates and final project costs / Budget efficiency	Total public sector cost per resident participating in PB	# of people involved at different phases of the PB process / cost per project process /	Total public sector cost per inhabitant / Amount or % of money spent on works executed through PB per inhabitant	Efforts for administration (costs/time) / Time from proposal to realization / Time of a proposal per process stage
“Developing ideas together with the citizens”	Knowledge / To know more on how the decisions are made in administration	Democratize governance	Dialogue on budget decisions	Citizens as co-workers		# of nongovernmental and community-based organizations involved in PB.					
“Reaching disadvantage citizens”	(Gender) Equity	Enhance social equality / reduce inequality / Inclusiveness of minority groups / Openness	Make public budgets more equitable	New channels for public participation for poor and disenfranchised communities	Social justice / poorer citizens and neighbourhoods receive greater levels of public spending	# and % of participants who are of low SES and/or people of colour, participation in local election etc.	Allocation of PB funds by project type (to be compared with the allocation of comparable funds prior to PB).	# and % of PB voters who are eligible to vote but did not vote in the most recent local election.	# and % of PB voters who are ineligible to vote in local elections.	Expenditures spent per areas	PB board composition
„Further contributions“	Another nice event in the city / A fun tool	Increased well being	Initiating dialogue for conflict reduction	Compliance with requirements of the federal leadership to involve residents	Improved infrastructure / improved services / City image	% of women councillors in local authorities/ Voter turnout and voter participation by sex	Civic Associations per XX,XXX population / Anti-corruption Commission	# of complaints compared to the situation without PB*	HDI indices / % of citizens that improve their quality of life as a result of PB	# and % of elected officials re-elected. / Electoral support level	# of related conferences/events / Increased interest from other municipalities

Table 7: Overview of goals and indicators from brainstorm meeting and SLR

4 Process phases with basic set indicators

For the defined process phases a basic set of information/indicators is provided. This basic set includes the most common information for the evaluation of a PB process, e.g. the goals of the process, the participation rate, the used budget or the number of implemented proposals. Furthermore, the following information in the individual phases should be assigned to the category's municipality-related and citizen-related factors to identify the sources for that information.

- Municipality-related information: data that have to be provided by the municipality;
- Citizen-related information: data that have to be collected from the citizens.

4.1 (Re-) Design phase

The design phase is the first phase of any new PB process implementation. Before the very first run, the municipality must determine for itself why a PB process is implemented and what amount of budget should be allocated. In this context, specific goals can also be added if they have been defined. The municipality should also determine; which target groups should be focussed by the PB process. To phrase the goals more precisely, it is advisable to elaborate the PB process from different point of views, for instance by including the perspective of the administration, politicians and citizens. Based on that appropriate activation and information activities should be chosen to reach out for the citizens (in the information phase of the process).² After the first implementation, contingency factors may change later and also due to the first experiences made with PB, a redesign of the PB process and its phases and goals might become necessary. Also an evaluation will highlight possible improvements. For every phase certain terms need definition (e.g. participants: definition of persons that are eligible to participate, usually the citizens) and sometimes explanations are needed for goals and indicators. Table 8 provides an overview of what needs to be determined.

Citizen-related factors/ Municipality-related factors
(Re-)Define number of eligible participants (inhabitants/citizens/users)
(Re-)Define sub-goals

² For more information on the process design and information activities see:

https://empaci.eu/photo/Files/GoA%202.1%20PB%20type%20groups%20working%20document_final%2024112020.pdf

(Re-)Define budget amount

Table 8: Basic characteristics of the (re-) design phase

4.2 Proposal phase

At a minimum, a proposal or a voting phase has to be part of the participation process in order to call it a “PB process” according to Sintomer/Herzberg/Röcke (2010). The proposal phase can take various forms, since the actors to propose projects could be the citizens, the local council or the administration. If the citizens are eligible to make proposals, the topics and the scope of the proposals can be limited based on the rules defined for the PB process. The crucial indicators (see Table 9) are the participation rate and the number of proposals.

Citizen-related factors
Number of citizens participating
Participation rate (% of citizens / eligible persons)
Number of proposals received
Main categories of proposals
Main target groups of proposals

Table 9: Basic indicators for the proposal phase

4.3 Voting phase

During the voting phase, the citizens vote on the proposals that are eligible. Different models with one or more vote per participant are possible. Here, the municipality has to get an overview of how many citizens have participated and respectively what the number of votes is (see Table 10).

Citizen-related factors
Number of citizens voting
Participation rate (% of citizens/ eligible persons)
Number of votes received

Table 10: Basic indicators for the voting phase

4.4 Implementation phase

In the implementation phase the voted proposals will be realized. Also, the implementation phase is the last phase of every PB process, where evaluations take place. In this context, the municipality could investigate the reasons for implementation or non-implementation (e.g. too high costs or legal restrictions, that were not in the scope of the PB) and communicate them. The communication is a main part of the accountability of the process. Essentially, all budget indicators will be evaluated as shown in Table 11.

Municipality-related factors
Amount of unused PB budget
Ratio of used PB budget
Amount allocated per PB topic
Number of realized projects after 1 year

Table 11: Basic indicators of the implementation phase

5 Additional sets with specific indicators

Depending on the different focal points of the PB process (as explained in section 3.3) different sub-goals can be formulated and lead to additional sets of KPIs to be evaluated. These additional sets allow the municipality to obtain more information about its PB process. In the following, the additional sets are presented with the additional indicators per PB phase.

5.1 Innovation

Within this set, it is possible to investigate the innovative potential of PB and somehow the creativity of citizens i.e. whether unexpected proposals are submitted and from whom (Table 12). ‘Unexpected proposals’ encompass proposals that were not thought about by the municipal council and the administration. This indicator would highlight the diversity gained in resource allocation. The assessment to categorize a proposal as unexpected, could be done by the administration itself or supported by a PB advisory board or maybe the local council. That depend on the process design of the PB process.

Additionally, the citizens’ groups that create innovative proposals can be identified. This creates further opportunities to get to know the structure of the community:

- Which groups think about the community?
- Which persons make innovative proposals?
- Which one proposals need improvement?

Based on that, activation events can be planned and advertisement can be tailored to reach out for groups with high potential proposals as well as for citizens that need further information for their proposals. Depending on the evaluation, some groups may just be targeted to get more proposals, whereas others are targeted to encourage them and improve the quality of proposals. The information of citizens is important to evaluate (see the sub-sets of Feedback & Monitoring and Inclusiveness).

Embedded in following phase	Citizen-related factors	Additional possible narrative
Proposal phase	Number of unexpected/ innovative proposals	Which groups submit innovative proposal ideas? (differentiation possible, e.g. age)
	Number of new proposals (screen last runs)	
Implementation phase	Number of unexpected/ innovative proposals realized	

Table 12: Additional indicators for the innovation set

5.2 Proposal quality

The feasibility check phase can follow the proposal phase or the voting phase. In both cases, a decision is made as to whether the proposals are feasible and which of them should be pursued or refused.³ Such reasons should be part of the communication to inform the citizens. Potential indicators are shown in Table 13.

Embedded in following phase	Municipality-related factors
Proposal phase	Number of feasible proposals
	Number of refused proposals
	Ratio of feasible proposals
Voting phase	Number of continued proposal implementations
	Number of discontinued proposal implementations
	Ratio of feasible proposals

Table 13: Additional indicators of the feasibility set

5.3 Feedback/monitoring

The feedback set serves to find out how the citizens are reached (during the proposal phase) and how they perceive satisfaction, trust, accountability and transparency over the PB process (in implementation phase). For this purpose, the sub-section 5.2.1 introduces additional indicators for the feedback and monitoring. The sub-sections 5.3.2-5.3.4 present possible scales and items to create a feedback survey. Results of such feedback surveys should be presented in a concise way to the citizens to be transparent and accountable.

5.3.1 Feedback/monitoring set indicators

This set identifies the ways how citizens are reached and what they think about the PB process and how the administration implemented the PB process (see Table 14). This especially addresses the so-called information phase, as citizens get information about the process. Citizens should understand the process and its regulations in order to accept it. The impact of the PB process could be measured in other areas of the administration and services, too. Interesting areas are the citizens' satisfaction with the participation process (Zolotov et al. 2018). Additionally, maybe citizens engage in other topics, forums, or assemblies because of the initial contact with PB process (Wampler et al. 2018). To get an idea, if the PB process is established in the community, the number of media reports can be counted as well as the communication with other municipalities about PB.

³ For more information on the feasibility check:

https://empaci.eu/photo/Files/GoA%202.1%20PB%20type%20groups%20working%20document_final%2024112020.pdf

In addition, it could be measured whether the PB process is acknowledged outside the own municipality and if other administrations are interested in running a PB.

Embedded in following phase	Citizen-related factors	Municipality-related factors
(Re-)Design phase	Extent to which citizens want to be involved into redesigning prospective PB processes	-
Proposal phase	-	Number of citizens that were reached by different information actions (group differentiation possible: age, activities, gender, NGO members etc.)
Voting phase	-	Number of votes by citizens after different actions (marketing/ activation success)
Implementation phase	Perceived satisfaction of citizens (differentiation possible, e.g. with voting)	Perceived satisfaction of internal employees
	Perceived trust of citizens	-
	Perceived transparency of the PB process	
	Increased number of contacts outside the PB process	Increased number of positive reports in media
	-	Number of citizens that were reached by different actions (group differentiation possible: age, activities, gender etc.)

Table 14: Additional indicators for the feedback and monitoring set

5.3.2 Perceived satisfaction – Possible questionnaire

As satisfaction is a general aspect of the citizens' life, the citizens could be asked directly:

"How satisfied are you with the life in the municipality XX?"

The citizens would answer e.g. on a 5-point-scale, e.g. dissatisfied=1, rather dissatisfied=2, neutral=3, rather satisfied=4, and satisfied=5. Analysing the rich literature on how to measure satisfaction, Zenker et al. (2013) provide such scale as an example.

Another possible item for a questionnaire is the statement:

"I'm satisfied with life in the municipality XX."

This statement has to be evaluated by the citizens by using a modified 5-point-scale with the following values: strongly disagree=1, disagree=2, neutral=3, agree=4, and strongly agree=5.⁴

These items can be asked for specific parts of the PB process as well, e.g. the satisfaction with the PB process as a whole, or the voting process in particular. Moreover, the communication of the feasibility checks or the results of the implementation phase could be added.

⁴ Further sample questions can be found in the EmPaci citizen survey in English and the different EmPaci-partner languages: http://empaci.eu/photo/Files/EmPaci%20GoA%202.2%20Output%201%20Citizen%20survey_final.pdf

5.3.3 Perceived trust – Possible questionnaire

Trust is, as a latent variable not easily assessable. However, some constructs have been developed to explore trust by a questionnaire. The following items are based on Grimmelikhuijsen and Knies (2017) and measure trust in three dimensions: perceived benevolence, perceived competence and perceived integrity.

- Benevolence
 - *“If citizens need help, the municipality of XX will do its best to help them.”*
 - *“The municipality of XX acts in the interest of citizens.”*
 - *“The municipality of XX is genuinely interested in the wellbeing of citizens.”*
- Competence
 - *“The municipality of XX is capable.”*
 - *“The municipality of XX is effective.”*
 - *“The municipality of XX is skillful.”*
 - *“The municipality of XX is expert.”*
 - *“The municipality of XX carries out its duty very well.”*
- Integrity
 - *“The municipality of XX approaches citizens in a sincere way.”*
 - *“The municipality of XX is sincere.”*
 - *“The municipality of XX keeps its commitments.”*
 - *“The municipality of XX is honest.”*

Again, the items are formatted as a 5-point-scale: strongly disagree=1, disagree=2, neutral=3, agree=4, and strongly agree=5. The citizens will have to assess these statements and provide their opinion. As this is a construct, i.e. something that cannot be directly measured, multiple items are used to ensure reliable and valid results. In order to have a handy questionnaire for the citizens, the dimensions may be shortened.

5.3.4 Perceived transparency – Possible questionnaire

Based on Alessandro et al. (2021) a possible set of questions assessing transparency could look like this:

“The municipality XX...

- *... does not provide information about its plans.*
- *... provides information about its plans but does not provide information about implementation and accomplishments.*
- *... provides information about its plans, implementation and accomplishments.”*

Alessandro et al. used a 7-point- scale for their study, but a 5-point scale could be suitable as well for the evaluation: strongly disagree=1, disagree=2, neutral=3, agree=4, and strongly agree=5.

5.4 Process delays

Process delays could be examined per PB phase (see Table 15). Based on the number of delayed actions per phase, the reasons for the delays can be described more precisely. For instance, if the feasibility check of some proposals is delayed, the category of the underlying projects can be traced. Maybe there are certain project ideas that need more resources to be evaluated. For future implementations of PB, these proposals will get a higher priority and will be considered first. The communication of such delays provides insides to the citizens to increase transparency and accountability.

Embedded in following phase	Municipality-related factors	Additional information to be collected
Proposal phase	Number/ Ratio of delayed feasibility checks before the implementation phase	Reasons for the delay to tackle
Voting phase	Number/ Ratio of delayed feasibility checks before the implementation phase	
Implementation phase	Number/ Ratio of delayed implementations	
	Number/ Ratio of delayed feasibility checks	
	Number/ Ratio of realized projects after 2 years	

Table 15: Additional indicators for the process delay set

5.5 Online-tool

A growing aspect in citizen participation is the e-participation. To communicate with the citizens, increasingly online solutions are used (Kuika Watat and Jonathan 2021; Coleman and Cardoso Sampaio 2017). To measure the success of these tools, a lot of numbers and ratios are trackable (see Table 16). Besides the obvious indicators (e.g. count of visitors, comments, likes, proposals and successful and aborted voting processes), there are some specific data to track with an online platform, which do not only refer to the tool but to the website as well. One is the bounce rate: It measures, how many bounces (short time visits, 5-10 seconds) are being made by the visitors and show, on which part of the website citizens have problems to follow the navigation. This could improve the pathfinding and usability of the website/platform.⁵ A second is the conversion rate: It tracks the number of visits in relation to the number of service claims (e.g. number of votes). This information will reveal, how many visitors actually use this platform/website for proposing/voting. And finally, the device that is used by the citizens to visit the platform can be identified. That will give information on the situation in which citizens are active, e.g. whether

⁵ For more information, see: <https://empaci.eu/photo/Files/Empaci%20-%20Output%204.1.2.pdf>

they just complete a fast vote via mobile phone redirecting from any social media site of the municipality or whether they use a home computer and use a search engine to find the voting platform. By looking at this data, a better understanding in which circumstances citizens participate in a specific environment can be achieved.

Embedded in following phase	Municipality-related factors
Proposal phase	Number of accounts on participation platform
	Number of comments on proposals (positive/ negative)
	Number/ ratio of proposals made online
	Number of PB website visitors
	Number of clicks, likes, page impressions etc. on social media for PB projects overall
Voting phase	Ratio of discontinued voting processes
	Number of PB website visitors (differentiation possible, e.g. used devices)
	Number/ ratio of votes made online/ offline
	Number of clicks, likes, page impressions etc. on social media for PB projects overall
	Conversion rate
Implementation phase	Number of possible comments on implementation (positive/ negative)
	Number/ ratio of comments on proposals
	Average time spend on the platform
	Bounce rate

Table 16: Additional indicators indicators for the online-tool set

5.6 Cost-efficiency

A crucial part of such participation tool are the acquisition cost and its running costs (Schneider and Busse 2019). In order to be efficient over time, the occurring costs in different process phases (collect proposals, feasibility checks, organizing voting phase etc.) should be tracked as shown in Table 17. A short information about the cost effectiveness might increase the transparency and accountability.

Embedded in following phase	Municipality-related factors
Proposal phase	Amount of expenditure for proposal phase
	Amount of expenditure per (feasible) proposal
	Time (in h) invested in checking the proposals
Voting phase	Amount of expenditure for voting phase
	Amount of expenditure per (feasible) proposal
Implementation phase	Amount of total expenditure
	Average duration of feasibility checks
	Average duration of the implementation of the proposal
	Amount of expenditure of realized (and discontinued, not feasible) proposal = average amount per proposal processing
	Average amount of realized proposal per citizen
	Budget efficiency (% of works carried out using PB x (100) x (Budget by PB/Cost of works))

Table 17: Additional indicators for the cost-efficiency set

5.7 Co-creation

The co-creation phase can be embedded in the proposal phase and/or implementation phase. It is of high importance in terms of deliberation. In the proposal phase new proposals are developed

together with citizens by the administration or already submitted proposals are further developed in cooperation with citizens (Ertiö et al. 2019). This process can also be completed together with representatives of the local council and/or local NGOs such as citizen initiatives.

In the implementation phase citizens or NGOs and associations might be involved in the realisation. The proposers of winning projects are contacted by the administration so that the projects are implemented based on more specific information by the proposer or even by involving a larger number of citizens. It is even possible that citizens help to realize the implementation by offering their time and financial resources. Citizens and NGOs will possibly actively support the realization of proposals. In addition, that creates relief for parts of the administration, e.g. the infrastructure department

Based on these two possible ways, an evaluation of the number of jointly or further developed proposals highlights the impact of the co-creation and extended exchange with citizens (see Table 18). As these factors need both to be involved, citizens and administration, these indicators are designated as citizen- and municipality-related.

Embedded in following phase	Citizen-related factors	Municipality-related factors
Proposal phase	Number/ ratio of jointly developed proposals	
	Number of not jointly developed (and refused) proposals	
Implementation phase	Number of implementations actively supported by citizens (NGOs, working groups)	

Table 18: Additional indicators of the co-creation set

5.8 Inclusiveness

In this context, it could be examined which population groups participate in the PB process and which do not, with KPIs shown in Table 18. However, it should be noted that this depends on the general population structure of the municipality. The inequality could be analysed especially in the proposal and the voting phase. Based on the population, different groups may be identified. Furthermore, this could be linked to the set 'online-tool' and analysed who has the possibility to vote online and uses it.

In the implementation phase the number of realized proposals addressing minority needs should examine to what extend the PB process benefits minorities. By tracking the number of proposals addressing minority needs in comparison to the number of realized proposals, the attitudes of citizens towards inclusiveness are made visible. Additionally, the amount or ratio of the participatory budget that is used for certain areas and districts will show, if the budget is distributed to the whole municipality from a spatial/ geographical point of view, e.g. whether all

districts of the municipality benefit from the participatory budget, irrespective of the income and social situation of the inhabitants of the district (Lerner and Pape 2016).

Embedded in following phase	Citizen-related factors
(Re-)Definition phase	If applicable: PB board composition
Proposal phase	Number of eligible citizens (potential PB participants)
	Ratio of citizens not eligible to propose
	Number of citizens who have perceived the PB process
	Number of proposals addressing minority needs / areas
	Number of proposals from disadvantaged voters (or different groups)
Voting phase	Number of eligible citizens
	Number of disadvantaged voters
	Ratio of PB voters not eligible to vote
	Number of disadvantaged voters
	Number of citizens noticed the PB process
	Number of proposals addressing minority needs
	Number/ ratio of citizens that vote in PB but didn't in the last election
Implementation phase	Number/ ratio of realized proposals addressing minority needs areas (compared to prior PB)
	Amount/ ratio of used PB budget per district per district citizens

Table 19: Additional indicators for the inclusiveness sets

6 PB evaluation scheme template – Overview

The following table provides an overview of all presented evaluation indicators for every phase of a potential PB process. This “construction kit” is adaptable to the goals and focuses of municipalities, and provides useful evaluation tips for practitioners depending on different sub-goals. Furthermore, the municipality-related factors are highlighted in blue and the citizen-related factors in orange in Table 20. The municipality-related factors have to be collected by the administration, whereas citizen-related factors have to be asked through surveys or the like from the citizens.

At the end, citizens have to benefit from the collected information and evaluations in some form. As mentioned over the document, the accountability of the process has to be ensured. A short precise communication of the results of the evaluation plays a decisive role, e.g. a change in the process design could be based on the citizens’ feedback or an improved information and activation activities are based on the changing indicators over time. The communication of such changes and reasons shows transparency to the citizens and the PB process will be accountable.

“PB evaluation scheme”	Basic set	Advanced set(s)							
		Proposal quality	Innovation	Feedback and monitoring	Process delay	Online-tool	Cost efficiency	Co-creation	Inclusiveness
Sub-goals	“Get a PB process started”	“Record quality of ideas”	“New ideas for community life”	“What people know about the PB and what do they think about the municipality”	“Fast implementation of as many ideas as possible”	“Get an online platform going”	“Recognize the costs of the PB process”	“Developing ideas together with the citizens”	“Reaching disadvantaged citizens”
(Re-)Design phase	<ul style="list-style-type: none"> • (Re-)Define # of eligible participants (inhabitants /citizens/ users) • (Re-)Define sub-goals • (Re-)Define budget 	<ul style="list-style-type: none"> • (Re-)Position feasibility check after proposal or voting phase 	-	<ul style="list-style-type: none"> • embed (continuous) feedback surveys in different phases • # of assemblies held to inform 	-	<ul style="list-style-type: none"> • Thinking about citizens online access • Trackable links • use digital analysis tools 	<ul style="list-style-type: none"> • Time recording needed 	<ul style="list-style-type: none"> • Integrate ideas from citizens (NGOs, working groups) • # of NGOs involved in PB • If applicable: PB board composition 	
Proposal phase	<ul style="list-style-type: none"> • # of citizens participating • Participation rate (% of citizens) • # of proposals received in total • Main categories of proposals • Main target groups of proposals 	<ul style="list-style-type: none"> • # of feasible proposals • # of refused proposals • % of feasible proposals 	<ul style="list-style-type: none"> • # of unexpected/ innovative proposals • Which groups have the innovative proposal ideas? (e.g. age) 	<ul style="list-style-type: none"> • # of citizens that were reached by different information actions (# of citizens noticed the PB process and implementations) (group differentiation possible: age, activities, gender, NGO relation etc.) 	<ul style="list-style-type: none"> • # of delayed feasibility checks before the implementation phase 	<ul style="list-style-type: none"> • # of accounts on participation platform • #/% of comments on proposals (positive/negative) • # of proposals and vote made online • # of PB website visitors • # of clicks, likes, page impressions etc. on social media for PB projects overall 	<ul style="list-style-type: none"> • amount of expenditure for proposal phase • amount of expenditure per (feasible and not feasible) proposal • Time (in h) invested in checking the proposals 	<ul style="list-style-type: none"> • # of jointly developed proposals • # of not jointly (and cancelled) proposals 	<ul style="list-style-type: none"> • # of eligible citizens • % of proposers not eligible to vote • # of projects addressing minority needs/areas • # of proposals from disadvantaged voters (or different groups: people of colour, immigrants)
Voting phase	<ul style="list-style-type: none"> • #/% of citizens voting • # of votes received in total (up-vote, down-votes) 	<ul style="list-style-type: none"> • # of continued proposals • # of discontinued proposals • % of feasible proposals 	-	<ul style="list-style-type: none"> • # of citizens that were reached by different information actions (# of citizens noticed the PB process and implementations) (group differentiation possible: age, activities, gender, NGO relation etc.) 	<ul style="list-style-type: none"> • # of delayed feasibility checks before the implementation phase 	<ul style="list-style-type: none"> • % of discontinued voting processes • # of PB website visitors (used devices) • #/% of votes made online/offline • # of clicks, likes, page impressions etc. on social media for PB projects overall • Conversion rate 	<ul style="list-style-type: none"> • amount of expenditure for voting phase • amount of expenditure per (feasible and not feasible) proposal 	-	<ul style="list-style-type: none"> • # of eligible citizens • # of disadvantaged voters • % of PB voters not eligible to vote • # of citizens noticed the PB process • # of projects addressing minority needs • #/ % of citizens that vote in PB but didn't in the last election
Implementation phase	<ul style="list-style-type: none"> • amount/% of used PB budget • amount allocated per PB topic • # of realized projects after 1 year 	-	<ul style="list-style-type: none"> • # of unexpected proposals realized 	<ul style="list-style-type: none"> • Perceived trust / transparency/ satisfaction (per aspect, e.g. communication, or per phase etc.) • # of complaints through PB • #/% of citizens new/returning to PB • Perceived satisfaction of internal employees • Increased # of contacts outside of the PB process • # of positive reports in media • # of citizens that were reached by different actions (# of citizens noticed implementations) (group differentiation: age, activities, etc.) 	<ul style="list-style-type: none"> • # of delayed implementations • # of delayed feasibility checks • % of delayed feasibility checks • #/% of realized projects after 2 years • ∅ duration of the implementation of the proposal 	<ul style="list-style-type: none"> • # of possible comments on implementation (positive/negative) • Average time spend on the platform • bounce rate • # of actives (comment /propose/vote) 	<ul style="list-style-type: none"> • amount of total expenditure • ∅ amount for feasibility check and implementation per proposal • amount per process stage • ∅ amount per proposal processing • ∅ amount per citizen • Budget efficiency 	<ul style="list-style-type: none"> • # of implementations actively supported by citizens (NGOs, working groups) 	<ul style="list-style-type: none"> • #/% of realized projects addressing minority needs/areas (compared to prior PB) • amount/ % of used PB budget per district per district citizens

Table 20: PB Evaluation scheme - Overview of all indicators and sets per process phase

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Appendix

List of literature analysed in the SLR:

No.	Article name	Author	Format	Year	search terms for goals of PB			search terms for indicators for PB		
					goals	targets	objectives	evaluation	indicators	measures
1	Participatory budgeting: conceptual framework and analysis of its contribution to urban governance and the millenium development goals	Cabannes	document	2004	1				1	1
2	Budgeting for equity: How can participatory budgeting advance equity in the United States?	Pape/Lerner	article	2016	1					
3	Defining and achieving normative democratic values in participatory budgeting processes	Rossmann/Shanahan	article	2012	1					
4	Participatory budgeting	Shah	book	2007	1	1	1	1	1	1
5	Participatory budgeting in Midwestern states: Democratic connection or citizen disconnection?	Franklin/Ho/Ebdon	article	2009	1					
6	Integrating online and traditional involvement in participatory budgeting	Miori/Russo	article	2011	1			1		1
7	Transformative deliberations: Participatory budgeting in the United States	Gilman	article	2012	1					
8	Strategic interaction sequences: the institutionalization of participatory budgeting in New York City	Jabola-Carolus et al.	article	2018	1					
9	Budgets and ballots in Brazil: participatory budgeting from the city to the state	Schneider/Goldfrank	working paper	2002	1		1	1		
10	Participatory budgeting and community-based research: principles, practices, and implications for impact validity	Kasdan/Markman	article	2017	1			1		
11	The World Bank and the globalization of participatory budgeting	Goldfrank	article	2012	1		1			
12	From Porto Alegre to New York City: Participatory Budgeting and Democracy	Su	working paper	2017	1					
13	The core of the participatory budgeting problem	Fain/Goel/Munagala	article	2016	1					1
14	The contribution of participatory budgeting to the achievement of the Sustainable Development Goals: lessons for policy in Commonwealth countries	Cabannes	article	2018	1					
15	Participatory Budgeting at the Local Level: Challenges and Opportunities for New Democracies.	Krenjova/Raudla	article	2013	1					
16	(In) stability, a key element to understand participatory budgeting: Discussing Portuguese cases	Lopes Alves/Allegretti	article	2012	1					
17	Participatory budgeting: creator or creation of a better place? Evidence from rural Poland	Leśniewska-Napierała/Napierała	article	2020	1				1	
18	Participatory Budgeting Worldwide – Updated Version	Sintomer/Herzberg/Allegretti	study	2013	1	1	1			1
19	Pitfalls of aiming to empower the bottom from the top: the case of Philippine participatory budgeting	Aceron	working paper	2019	1					
20	'Development is a bag of cement': the infrapolitics of participatory budgeting in the Andes	Cameron	article	2009	1					
21	What does youth-led participatory budgeting reveal about youth priorities? Ideas, votes, and decisions	Collins et al.	article	2017	1					
22	Deliberating for sustainability: lessons from the Porto Alegre experiment with participatory budgeting	Calisto Friant	article	2019	1			1	1	
23	Reflections on participatory budgeting in New York City	Castillo	article	2015	1					
24	Participatory budgeting: Could it diminish health disparities in the United States?	Hagelskamp et al.	article	2018	1			1		
25	Participatory budgeting: adoption and transformation	Wampler/Touchton	article	2017	1					
26	Participatory budgeting and related practices	Vagin/Shapovlaova	article	2016	1		1			
27	The process and outcomes of participatory budgeting in a decentralised local government framework: a case in Uganda	Kasozi-Mulindwa	dissertation	2013	1		1			
28	Participatory budgeting: Core principles and key impacts	Wampler	article	2012	1					1
29	Participatory Budgeting (Rumbul)	Rumbul/Parsons/Bramle	report	2018	1					
30	Learning democracy through participatory budgeting: Who learns what and so what	Lerner	conference paper	2008	1					
31	Engaging citizens: Participatory budgeting and the inclusive governance movement within the United States	Gilman	article	2016	1					
32	An evaluation of Glasgow City participatory budgeting pilot wards 2018/19	Harkins	report	2019		1		1		
33	Evaluation of Participatory Budgeting Activity in Scotland 2016-2018	O'Hagan et al.	report	2019		1		1		
34	Participatory Budgeting (Cabannes) a powerful and expanding contribution to the achievement of SDG and primarily SDG 16.7	Cabannes	essay	2019		1				
35	Participatory Budgeting Conceptual Framework and Analysis of its Contribution to urban governance and the millenium developement goals	Cabannes	document	2004		1	1			
36	PARTICIPATORY BUDGETING in south africa	Langa/Jerome	working paper	2004		1				
37	Participatory Budgeting and its Diversity	Allegretti et al.	document	2013		1				
38	Deliberating for sustainability: lessons from the Porto Alegre experiment with participatory budgeting	Friant	article	2019		1				
39	Participatory budgeting in the UK: a challenge to the system?	lied	book	2008		1				
40	Breathing life into democracy: the power of participatory budgeting	Community Pride Initiative & Oxfam	document	2005		1				
41	Policy Formulation and Implementation on Participatory Budgeting in Seoul, South Korea	Lee	article	2017		1				
42	The contribution of participatory budgeting to the achievement of the Sustainable Development Goals: lessons for policy in Commonwealth countries	Cabannes	article	2018		1				
43	Bringing Budgets Alive: Participatory Budgeting in Practice	Community Pride Initiative	report	2005		1				
44	Participatory budgeting and e-Participation in smart cities: comparative overview	Karachay/Chugunov/Neustroeva	conference paper	2020		1			1	

No.	Article name	Author	Format	Year	search terms for goals of PB			search terms for indicators for PB		
					goals	targets	objectives	evaluation	indicators	measures
45	Participatory Budgeting in Çanakkale, Turkey (Chapter 12)	Akman	book, chapter	2009		1				
46	Participatory budgeting in a South African local municipality	Masiya/Mazenda/Gwabeni	article	2021		1				
47	Participatory budgeting: a significant contribution to participatory democracy	Cabannes	article	2004		1	1		1	
48	Participatory budgeting in Germany: citizens as consultants	Ruesch/Wagner	document	2014			1	1		1
49	Participatory budgeting: an innovative approach	Sgueo	briefing	2016			1			1
50	Participatory budgeting in Porto Alegre: toward a redistributive democracy	De Sousa Santos	article	1998			1	1		1
51	Participatory budgeting in Poland–finance and marketing selected issues	Bednarska-Olejniczak/Olejniczak	article	2017			1			
52	Participatory Budgeting: Models and Approaches	Aziz/Shah	document	2021			1	1		
53	Participatory budgeting: Findings from Germany	Weber et al.	article	2015			1			
54	Participatory Budgeting: The Philippine Experience	Ilago	book chapter	2005			1			
55	Participatory budgeting, community engagement and impact on public services in Scotland	O'Hagan et al.	article	2020			1	1		
56	Revisiting participatory budgeting as a potential service delivery catalyst	Fourie/Reutener	article	2012			1			
57	The characteristics and outcomes of participatory budgeting: Buenos Aires, Argentina	Crot	study	2009			1			
58	Involving citizens in public decision making: the case of participatory budgeting in Lithuania	BIRSKYTE	article	2013			1	1		
59	The Participatory Budgeting Towards a New Governance and Accountability	Rainero/Brescia	article	2018			1			
60	Participatory budgeting: Diffusion and outcomes across the world	Wampler/Hartz-karp	article	2012			1			
61	Does participatory budgeting bolster voter turnout in elections? The case of the Czech Republic	Kukučková/Bakoš	article	2019			1			
62	Reference Process Model for Participatory Budgeting in Germany	Scherer/Wimmer	conference paper	2012			1	1		
63	Participatory budgeting: The practice and the potential	Friendly	conference paper	2016			1			1
64	Participatory Budgeting in Bangladesh Local Government Context	Hossain et al.	article	2014			1			
65	When local Participatory Budgeting turns into a participatory system: challenges of expanding a local democratic experience	Sobottka/Streck	book chapter	2018			1			
66	Integrating online and traditional involvement in participatory budgeting	Miori/Russo	article	2011			1			1
67	Participatory Budgeting in Fissel, Senegal	Guèye	book chapter	2010			1			
68	Participatory budgeting and local governance: an evidence-based evaluation of participatory budgeting experiences in Brazil	Zamboni	working paper	2007				1	1	
69	Participatory budgeting in Germany–A review of empirical findings	Schneider/Busse	article	2018				1		
70	The impact of participatory budgeting on health and wellbeing: a scoping review of evaluations	Campbell et al.	article	2018				1		
71	Do citizens trust electronic participatory budgeting? Public expression in online forums as an evaluation method in Belo Horizonte	Barros/Sampeio	article	2016				1		
72	Developing criteria for evaluating a multi-channel digitally enabled participatory budgeting platform	Omar/Weerakkody/Sivarajah	conference paper	2017				1	1	
73	Development of an Evaluation Tool for Participative E-Government Services: A Case Study of Electronic Participatory Budgeting Projects in Germany	Nitzsche/Pistoia/Elsäßer	article	2012				1		
74	By the people, for the people: Participatory budgeting from the bottom up in North America	Lerner/Secondo	article	2012				1		
75	Studying Participatory Budgeting: Democratic Innovation or Budgeting Tool?	Godwin	article	2018				1		
76	The Rationalization of Public Budgeting in China: A Reflection on Participatory Budgeting in Wuxi	Wu/Wang	article	2011				1		
77	Voice, votes, and resources: Evaluating the effect of participatory democracy on well-being	Boulding/Wampler	article	2010				1	1	
78	Participatory budgeting: Spreading across the globe	Wampler/McNulty/Touchton	document	2018				1		
79	Participatory Budgeting in the United States: A Preliminary Analysis of Chicago's 49th Ward Experiment	Stewart et al.	article	2014				1		
80	Does participatory budgeting improve decentralized public service delivery?	Beuermann/Amelina	working paper	2014				1	1	
81	Participatory budgeting at scale and bridging the rural–urban divide in Chengdu	Cabannes/Ming	article	2014				1		
82	Participatory budgeting in North America: the case of Guelph, Canada	Pinnington/Lerner/Schugurensky	article	2009				1		
83	Schools of democracy: How ordinary citizens (sometimes) become competent in participatory budgeting institutions	Talpin	review	2011				1		
84	Could participatory budgeting work in the United States?	Baiocchi/Lerner	article	2007				1		
85	Pathways to Citizen Participation: Participatory Budgeting Policy Choice by Local Governments	Krueger/Park	article	2020				1		1
86	Participatory budgeting as if emancipation mattered	Baiocchi/Ganuza	article	2014				1		
87	Testing the Participation Hypothesis: Evidence from Participatory Budgeting	Johnson/Carlson/Reynolds	pre-print article	2021				1		
88	What's going on in my city? recommender systems and electronic participatory budgeting	Cantador et al.	paper	2018				1		
89	Models of participatory budgeting—the case study of Polish city	Polko	article	2015				1		
90	Does participatory budgeting have an effect on the quality of public services The case of Peru's water and sanitation sector	Jaramillo/Alcázar	working paper	2013					1	
91	The participatory budgeting and its contribution to local management and governance: Review of experience of rural communities from the Ecuadorian Amazon	Buele et al.	article	2020					1	
92	Participatory budgeting in Brazilian cities: limits and possibilities in building democratic institutions	Souza	paper	2001					1	
93	The effects of participatory budgeting on municipal expenditures and infant mortality in Brazil	Goncalves	article	2013					1	1
94	Learning citizenship and democracy through participatory budgeting: The case of Rosario, Argentina	Lerner/Schugurensky	conference paper	2005					1	
95	Efficiency and usability of participatory budgeting methods	Benadé/ et al.	article	2018					1	
96	Participatory budgeting in local government: Evidence from New Jersey Municipalities	Zhang/Liao	article	2011					1	1
97	An unlikely success: Peru's top-down participatory budgeting experience	McNulty	article	2012					1	1
98	What explains the success of participatory budgeting? Evidence from Seoul autonomous districts	Choi	article	2014					1	
99	Participatory budgeting in Australian local government: An initial assessment and critical issues	Christensen/Grant	article	2016					1	
100	The impact of participatory budgeting on basic services: municipal practices and evidence from the field	Cabannes	article	2015					1	

No.	Article name	Author	Format	Year	search terms for goals of PB			search terms for indicators for PB		
					goals	targets	objectives	evaluation	indicators	measures
101	Citizenship education through participatory budgeting: The case of Bioscience high school in Phoenix, Arizona	Cohen/Schugurensky/Wiek	article	2015					1	
102	Budget processes and participatory budgeting in Nigeria: Lessons from Latin America	Iloh	article	2016					1	
103	Influence of the Participatory Budgeting on the Infrastructural Development of the Territories in the Russian Federation.	Tsurkana et al.	article	2016					1	
104	Participation and deliberation on the internet: A case study of digital participatory budgeting in Belo Horizonte	Sampaio/Maia/Marques	article	2011					1	
105	Social and learning practices in participatory democracy process The case study of self-organized communities in Maribor, Slovenia, contextualised through the e-participatory budgeting in Reykjavik, Iceland	Gregorčič	article	2016					1	
106	The digital revolution and governance in Brazil: Evidence from participatory budgeting	Toucton/Wampler/Spada	article	2019					1	
107	Does participatory budgeting improve decentralized public service delivery? Experimental evidence from rural Russia	Beuermann/Amelina	article	2018					1	
108	Is Participatory Budgeting Understood Enough by Citizens in Terms of Being Reachable for Them?	Xhaferi/Dhrami	article	2019					1	
109	But who will speak for the people? The travel and translation of participatory budgeting	Baiocchi	book chapter	2015					1	
110	The use of GIS and indicators to monitor intra-urban inequalities: A case study in Rosario, Argentina	Martínez	article	2009					1	
111	Does participatory budgeting change the share of public funding to low income neighborhoods?	Shybalkina/Bifulco	article	2018						1
112	Participatory budgeting and vertical agriculture A thought experiment in food system reform	Epting	article	2018						1
113	Sustainability as a measure of success Externally promoted participatory budgeting in El Salvador 10 years later	Bland	article	2017						1
114	Citizens and the city the case for participatory budgeting in the City of Zagreb	Švajjek/Bakarić/Rasić/Sumpor	paper	2019						1
115	Participatory Budgeting and Traditional Participation in Czech Municipalities	Minárik	article	2020						1
116	Does participatory budgeting have an effect on the quality of public services? The case of Peru's water and sanitation sector	Jaramillo/Alcázar	working paper	2013						1
117	Organizational complexity and participatory innovation participatory budgeting in local government	Ewens/van der Voet	article	2019						1
118	Lessons from Latin American experience in participatory budgeting	Goldfrank	conference paper	2006						1
119	Participatory budgeting without participants: Identifying barriers on accessibility and usage of German participatory budgeting	Zepic/Dapp/Krcmar	conference paper	2017						1
120	Participatory budgeting and transparency in municipal finances	Crossman/Fischer	article	2016						1
121	Women in budgeting: A critical assessment of participatory budgeting experiences	Allegretti	conference paper	2014						1
122	Enablers of Participatory Budgeting in Slovakia During the COVID-19 Pandemic	Bardovič/Gašparik	article	2021						1
123	The Schools Participatory Budgeting (SPB) in Portugal	Abrantes/Lopes/Baptista	report	2016						1
124	Reasons of power: Explaining non-cooptation in participatory budgeting	Holdo	article	2016						1
125	Knapsack voting for participatory budgeting	Goel et al.	article	2019						1
126	Participatory Budgeting—Not A One-Size-Fits-All Approach	Flynn	article	2016						1
127	Why do citizens (not) support democratic innovations? The role of instrumental motivations in support for participatory budgeting	van der Does/Kantorowicz	article	2021						1
128	Fairness in Long-Term Participatory Budgeting	Lackner/Maly/Rey	conference paper	2021						1