# Power to the People? Applying participatory budgeting to evaluate transport policy decisions

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## Introduction

Participatory budgeting has become a popular tool to involve citizens directly in policy decisions. However, the design and outcomes of these experiments have rarely been studied by economists which is surprising because it allows for direct measurement of preferences for actual policy decisions. This research develops a novel participatory budget game (PBG) to support (transport) policy decisions that addresses some of the key deficiencies of existing approaches to citizen participation and referenda, namely: self-selection and time constraints of inhabitants.

## Background

Participatory budgeting involves the participation of non-elected citizens in the conception and/or allocation of designated parts of the public budget (Sintomer et al. 2008). Typically, in a participatory budgeting process citizens are the first ones to move by establishing their social priorities through a budget proposal. Subsequently, representatives have to react to the proposal, deciding whether to implement it or not (Aragones and Sanchez-Pages, 2009). As such, participatory budgeting combines elements from both direct and representative democracy. Participatory budgeting is extensively studied in the democratic innovations literature as the introduction of the instrument resulted in a massive participation of those segments of the population typically disengaged from the institutions of representative democracy (Aragones and Sanchez-Pages, 2009) and it holds the promise to increase transparency in public spending, build trust between government and residents and increase the legitimacy of public decisions (Public Agenda, 2016).

Participatory budgeting must also be of interest to economists because the key aim is to make government policies more responsive to the preferences of citizens (Aragones and Sanchez-Pages, 2009). Moreover, a key advantage of participatory budgeting is that it deals with the economic problem of allocating limited resources (Sintomer et al. 2008). Finally, participatory budgeting can be portrayed as a novel application of welfare economics as the instrument seeks to investigate the social desirability of alternative economic situations (Boadway and Bruce, 1984). We suggest that economic research can contribute to alleviate some of the problems and pitfalls of participatory budgeting. While direct citizen participation in the budget making process may result in a budget that better reflects communities' greatest needs and values, some scholars have called attention to the high monetary and procedural costs of citizen participation and also warn that well-compensated professionals representing special-interests can dominate decision-making (e.g. Irvin and Stansbury, 2004). Our study aims to alleviate the above mentioned pitfalls through applying an innovative web-based choice experiment which resembles participatory budgeting.

## Methodology

We designed a novel participatory budget game (PBG) for the Transport Authority of the municipality Amsterdam and its agglomeration (hereafter: TAA) which will be played by a representative sample of 500 respondents living in this region. Respondents are instructed that the TAA decided to invest 100 million euro in improving the transport system and in 2017 decisions will be made regarding the allocation of the 100 million euro. Subsequently, the respondents are presented with 16 'initiative projects' that the TAA considers to include in the 100 million euro investment program. In the game, the projects will be characterized by several attributes such as costs, time savings of citizens that benefit from the project and safety improvements. Respondents are asked to choose those projects that best match their preferences within the budget constraint of the TAA. The constraints for participating in our PBG are relatively low when compared to regular participatory budgeting assemblies, as respondents receive a monetary compensation, it takes around 15-20 minutes to complete one game, and they can choose themselves when and where they complete the game.

In April/May 2017 PBG will be played four times by 500 respondents (experiments 1-4). In experiments 1 and 3 we assume that the budget of 100 million is fixed. In experiments 2 and 4 the budget is flexible which involves that the tax payments of respondents will decrease in case they do not allocate the total budget. Hence, respondents are enabled to 'vote' for an option that no money is spend on transport projects which results in a tax reduction of 100 euro for each of the 1 million residents of the TAA Region. Respondents are told that the 100 million euros will be allocated through a majority rule. Experiments 1 and 2 will be unlabeled experiments in the sense that respondents only receive information concerning the effects accruing from the 16 projects. Experiments 3 and 4 are labelled experiments in the sense that respondents are informed about: 1) the location of the project; 2) the impacts of the projects they themselves experience; 3) the impacts for other citizens. These experiments allow us to infer individuals' trade-offs between effects for themselves and others.

|  | Fixed Budget | Flexible budget |
|---|---|---|
| Unlabeled experiment | Experiment 1 (3$^{rd}$ week April) | Experiment 2 (4$^{th}$ week April) |
| Labeled experiment | Experiment 3 (1$^{st}$ week May) | Experiment 4 (2$^{nd}$ week May) |

## Expected results

The collected data will be analyzed using state-of-the-art discrete choice models where the possible portfolios are the alternatives. The quantitative analyses will show which attributes drive citizens' selection of the projects. Besides the marginal utility citizens infer from reductions of travel time, noise pollution and improvement of traffic safety we also aim to derive the extent to which citizens are willing to trade efficiency for equity. For instance, do citizens recommend a portfolio in which the travel time savings accruing from the investment program are to a certain extent equally spread among different mode users instead of recommending the portfolio with the highest total travel time savings? Ultimately, the quantitative analyses will allow us to infer the optimal portfolio of transport infrastructure projects for the TAA

## References

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