

Model of Application of Blockchain Technology in Public Finances

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Abstract : This paper presents a model of public finances, which combines three concepts: participatory budgeting, crowdfunding and blockchain technology. Participatory budgeting is defined as a process in which community members decide how to spend a part of community's budget. Crowdfunding is a practice of funding a project by collecting small monetary contributions from a large number of people via an Internet platform. Blockchain technology is a distributed ledger that enables efficient and reliable transactions that are secure and transparent. In this hypothetical model, the government or authorities on local/regional level would set up a platform where they would propose public projects to citizens. Citizens would browse through projects and support or vote for those which they consider justified and necessary. In return, they would be entitled to a tax relief in the amount of their monetary contribution. Since the blockchain technology enables tracking of transactions, it can be used to mitigate corruption, money laundering and lack of transparency in public finances. Models of its application have already been created for e-voting, health records or land registries. By presenting a model of application of blockchain technology in public finances, this paper takes into consideration the potential of blockchain technology to disrupt governments and make processes more democratic, secure, transparent and efficient. The framework for this paper consists of multiple streams of research, including key concepts of direct democracy, public finance (especially the voluntary theory of public finance), information and communication technology, especially blockchain technology and crowdfunding. The framework defines rules of the game, basic conditions for the implementation of the model, benefits, potential problems and development perspectives. As an oversimplified map of a new form of public finances, the proposed model identifies primary factors, that influence the possibility of implementation of the model, and that could be tracked, measured and controlled in case of experimentation with the model.

Keywords : blockchain technology, distributed ledger, participatory budgeting, crowdfunding, direct democracy, internet platform, e-government, public finance

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