

# Decision-making support by cognitive maps to understand the effects of crowdfunding finance on entrepreneurial self-efficacy

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## **Abstract:**

We know that Multiple Criteria Decision Making consists of selecting the best possible decision based on various parameters. The interest of representations as a map for decision support is not new. The model of cognitive maps (Chaib-draa et al, 1998) is a model studied in cognitive science. It allows to graphically representing knowledge (Louça 2000). Work, like those of Axelrod in 1976 used the cognitive maps to graphically represent the beliefs of a person in a particular area. Currently, cognitive maps are used primarily to assist in the structuring of thought (Huff et al, 1992). Also, they are used to help with decision making (Huff et al, 1992). The cognitive map is a model that aims to feature for the path by which an individual will find a solution to a given problem.

Crowdfunding mediated through the use of computers is a new paradigm used by individuals to solicit funds from others to complete projects. **In our contribution, we present the preliminary results of an exploratory qualitative study in the near 15 experts. Modeling was used by the cognitive maps by performing a structural analysis of the impacts of crowdfunding platforms in entrepreneurial self-efficacy by MICMAC method.**

In our contribution, we will use the tools of cognitive maps of the decision support to answer the question: "**What are the effects of Crowdfunding on entrepreneurial self-efficacy?**". Based on data collected on the kisskissbankbank platform, we will draw cognitive maps to try to explain the cross-impacts between crowdfunding and entrepreneurial self-efficacy and this in order to help decision makers to maximize the monetary contributions on these platforms. This research emphasizes the importance of cognitive biases and emotional intelligence as key variables of entrepreneurial self-efficacy on crowdfunding platforms.

One advantage of cognitive maps is that the graph uses concepts also used in the context of graph theory in operational research. In the case of causal maps, it is even possible to use cognitive maps as decision support tools to do the evaluation of the consequences of different alternatives to solve a problem. According to (Eden et al., 1992) and (Eden, 2004) among the properties of maps, the graph structure seems interesting to observe thus showing structural similarities between certain nodes and therefore between certain concepts.

This exploratory study is one of the first studies on the impacts of using crowdfunding to finance projects on entrepreneurial self-efficacy in the perspective of a behavioral and human science of entrepreneurial finance.

**Keywords:** Finance, Behavioral Operational Research, Crowdfunding, Entrepreneurial Finance, Cognitive Maps

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