

Title	他者との関係についての認知メカニズムに着目した EBPM向けの社会シミュレーションモデルおよび分析方法 の構築
Author(s)	松井, 一樹
Citation	
Issue Date	2025-06
Type	Thesis or Dissertation
Text version	ETD
URL	http://hdl.handle.net/10119/19969
Rights	
Description	Supervisor: 橋本 敬, 先端科学技術研究科, 博士

Abstract

In the aftermath of the COVID-19 pandemic, evidence-based policymaking (EBPM) has garnered significant attention in Japan. However, when applying EBPM to policies aimed at achieving the common good, uncertainty arises if the mechanisms through which policies exert their effects are unclear. This study aims to propose a simulation model and a method for examining how policies requiring behavioral change are adopted and institutionalized within the EBPM framework and to clarify the factors that facilitate their institutionalization. To achieve this objective, this study introduces an agent-based simulation model that incorporates cognitive mechanisms related to social perceptions into a micro-meso-macro loop, as well as a hybrid method that integrates agent-based simulation with multiple regression analysis. Utilizing the hybrid method, this study evaluates policy acceptability within a micro-meso-macro loop.

This study applies the proposed model and hybrid method to the cases of stay-at-home requests or orders in Japan and the United States in 2020, analyzing regional differences in people's responses. The United States, with greater diversity in culture, race, and geography compared to Japan, offers a unique opportunity to explore various social factors that may influence the acceptance of stay-at-home orders, such as political ideology, penalties for non-compliance, and participation in religious activities.

The conclusions of this study are presented below. Based on the analysis of case studies in Japan and the United States, the depth of thinking regarding others and individual personality were critical factors significantly influencing the acceptability of such policies requiring behavior change. The model and methodology proposed in this study revealed an important finding: the key personality traits relevant to institutionalizing stay-at-home requests differ between Japan and the United States. The model and method introduced in this study effectively assessed the acceptability of stay-at-home requests or orders during the COVID-19 pandemic in Japan and the United States, two countries with distinct cultural backgrounds and racial compositions, suggesting potential applicability to cases in other countries beyond Japan and the United States. As a factor contributing to the institutionalization of behavior change policies, it is essential to consider that value consciousness—inter-subjectively shared and fostered within the meso level of the micro-meso-macro loop through the depth of thinking regarding others—has a substantial influence on institutionalization. As outlined above, This study achieved our research objective by proposing a simulation model and method to investigate how policies requiring behavioral change are accepted and institutionalized to maintain the common good of society.

Keywords: EBPM, Micro-Meso-Macro loop, Institutionalization, Behavioral Change, Multi-Agent Simulation, COVID-19