

**AGENT-ORIENTED MODELS IN THE SYSTEM OF DECISION
SUPPORT ON
INTERBUDGETARY REGULATION MANAGEMENT**

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Research methodology. Agent-oriented approach to the creation of an economic and mathematical model for decision-making on the distribution of tax equity between the municipal and regional levels of government is developed. The model of intelligent agent is presented in the form of stochastic automata operating in random environments and having purposeful behavior.

Results. The structure of the stochastic automaton formalizing the behavior of intellectual agent in the decision making process to establish the proportions of the allocation of funds from taxes between levels of government is offered. Purposeful behavior and asymptotic optimality of the proposed machine design is grounded. The expressions for the final probabilities of pre- residence time of machine in each of its states is obtained.

Novelty. Scientific novelty of the research lies in the formulation and solution of the urgent problem of creating economic and mathematical models for process control of budget management in the structure $\langle \text{region} \rangle \leftrightarrow \langle \text{municipal entities} \rangle$ within the decision support system based on the agent-oriented approach.

Practical value. The practical significance of the research lies in the fact that they enable us to develop the scientific and methodological basis to solve important problems of process control of budget management through the creation and use of mathematical economic models based on the agent-oriented approach.

Keywords: interbudget regulation, agent- oriented approach, economic and mathematical models, stochastic automata.

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