# SOME PROBLEMS OF DYNAMICS OF DECENTRALIZED ECONOMIC SYSTEMS AND A METHOD FOR SOLUTION

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A system of production of $n$ kinds of commodities and services is considered. Matrix of resources state, matrix of request for product deliveries and matrix of deliveries are used to describe law of behaviour of the system.

A computing experiment in order to analyse an affect of inflation on economic behaviour was worked out and was revealed two stable states of the system that is bifurcation phenomenon. Transition from the same state to the other comes to pass as a leap that is defined as a catastrophe [1].

Pricing problems as well as taxing problem as optimal control problems are solvable by the theory [2, 3].

### References.
1. Arnold V.I. Theory of Catastrophes. M.: Nauka, 1990, [in Russian].
2. Moroz A.I. Control of Economic Process. M.: Academia, 1999, [in Russian].
3. Moroz A.I. Problems of Management in Decentralazed Economic Systems // Surveys in Applied and Industrial Mathematics, 2008, vol. 15, no. 3. Pages 411-438.