

ABSTRACT

Master thesis: 120 p., 20 fig., 23 tabl., 3 appendixes, 27 sources.

Object of study: process of property transformation in the transition economy..

Subject of research: mathematical models of privatization and methods of optimal control.

Objective: determine the optimal strategy of property transformation process control.

The paper is devoted to the analysis and modeling of the privatization process, which is a key process in transition period. The reason is that the problem of ownership has always been in the center of economic and political battle during any regime.

The mathematical model of the privatization process proposed as a set of differential equations that describe production's productivity, the level of employment and the amount of revenue from the sale of state-owned enterprises. The model used to find the optimal control strategy, where the speed of privatization is an input variable. Output variables are production's productivity and total employment in three groups of enterprises. First group contains state-owned enterprises. Second - enterprises that already privatized before the selected period. Third - objects that are in the process of transition from state-owned ownership to the private.

A computer simulation of the optimal control problem performed with different initial conditions, which allows choose the optimal privatization strategy.

PROCESS OF PROPERTY TRANSFORMATION, THEORY OF OPTIMAL CONTROL, GENERALIZED METHOD OF LAGRANGE MULTIPLIERS, ISOPARAMETRIC RESTRICTIONS, TRANSVERSALITY CONDITIONS.