MATHEMATICAL MODELLING OF MACROECONOMIC DYNAMICS

Tushishvili N.Z.

Georgian technical University
nato-tushishvili@mail.ru

Mathematical model of the economic dynamics is under construction in work on the basis of Keynes's equilibrium economy, enabling studying of evolution of the national income. The model is based on the concept of acceleration Samuelson-Keynes. In the offered model the factor of acceleration is considered function of time, and function of consumption is set in the form of functional depending from background of a production cycle.

From the constructed mathematical model, at corresponding selection of function of acceleration and functional consumption as special cases, turn out known models: Samuelson - Keynes, Mattie, Doffing, Prangishvili - Obgadze etc.

For practical application of the constructed model, it is offered on the basis of the known information of dynamics of the national income and consumption, to find unknown factors of model by a method of plural regress. For definition of function of acceleration, the variation problem where a condition of optimality is stability of economic dynamics is put.