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TWO-SECTOR MODEL OF ECONOMY UNDER CONDITIONS OF ECOLOGIZATION OF PRODUCTION AND CONSUMPTION

Summary

The urgency of the problem of ecologization of the economy and of other spheres of human life is revealed. This problem is one of the most acute and priority problems of the modern world, as the consequences of negative anthropogenic impact on the environment are environmental crises of regional and global scale, including climate change, which threatens not only socio-economic development of human civilization but also its existence. In this regard, not only the greening of the economy is relevant, but also the greening of consumption, education, culture, upbringing, and so on. The research of the stated and many other issues related to the greening of human activities requires the use of many scientific tools. The multifaceted nature of the object and subject of research is analyzed, which actually leads to the use of a set of conceptual, methodological and methodological approaches. The efficiency of the modeling method and the necessity of constructing the ecological economy models for the purpose to research conceptual bases and admissible scenarios of its formation and development are substantiated. The differential dynamic model of a two-sector economy in the conditions of greening of production and consumption processes has been developed, in which one sector is engaged in the production of the main aggregate product, and the other – in utilization of environmentally hazardous production and consumption residues. A specific feature of the model is also taking into account the socio-economic clustering of society, which allows in a sense to reflect both environmental, economic and social aspects of the economy under the study. Spatial variables of the model are liquid savings or liquid capital of production owners and workers in each sector, the price of the main aggregate product, the tariff for waste disposal, the amount of environmental pollution. The proposed model serves as a theoretical basis for building models of ecological and economic dynamics and the basis for some of its modifications, taking into account the specifics of behavioral functions and parameters, and is designed for experimental research in computer simulation of major trends and features of real ecological and economic systems. The results of such a study with models of this class also provide an opportunity to analyze acceptable environmental standards of production and consumption, test and improve the relevant information support, detail the fundamentally important requirements for the functions and parameters used in formalizing the model and ultimately create a valuable information base for systems support of management decisions on forecasting and implementation of ecological and economic processes.

Keywords: model, ecological and economic dynamics, ecological economy, socio-economic clustering, pollution disposal.

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