Formalization of sustainable innovative development process in the model of innovations diffusion

Shinkevich M., Shinkevich A., Chudnovskiy A., Lushchik I., Kaigorodova G., Ishmuradova I., Bashkirtseva S., Marfina L., Zhuravleva T.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, Econjournals. All rights reseved.The relevance of the study is reasoned by the fact that the sustainability of innovative development cannot be fully estimated by using the parameters which are traditionally observed by the official statistical bodies, so it suggests the need to improve methodological solutions and technology economic interpretation as well as scaling of indicators' values in this field. At the macro level there is a small number of indicators on the basis of which we can conclude about the stability of innovative development of economic systems at the meso-and macro level. In this regard, this article aims to formalize the process of sustainable innovation development on the basis of the parameters' set formation of the innovations' diffusion model and diagnosis of major economic systems' development level. The leading method is the parameters' set formalization of the quantitative model to estimate the level of economic systems' innovative development based on managerial interpretation of descriptive statistics' indicators of innovation activity in the framework of economic activities. Aset of quantitative parameters of 9 parametric model of economic systems' innovative development level is formalized in the article, allowing to diagnose the impact of cyclical factors and the institutional environment that are not fully implemented in the existing macro- systems assessing the level of economic systems' innovative development; methods of diagnosis and economic interpretation of the relevant indices and indicators' levels are proposed. The material of this paper is of practical value for enterprises' innovative activities regulators and monitoring agencies, for regional innovation infrastructure and transfer technology entities, for innovation-active enterprises, because on the basis of the obtained model the optimal solutions in the development of strategies for the upgrading of industries, regions, macro-economic system as a whole are possible.

Keywords