

WHAT DO YOU NEED: A FLYING CAR-TRANSFORMER OR A TRAIN-PLANE?

Sokolov, Yuri I., Moscow State University of Railway Engineering (MIIT), Moscow, Russia.



REVIEW OF THE BOOK: Macheret, D. A., Izmaikova, A. A.

The economic role of innovation in the long-term development of rail transport. Monograph. Moscow, MIIT publ., 2016, 162 p.

ABSTRACT

The book examines the features of innovation-oriented development of rail transport, analyzes theoretical precursors for forthcoming engineering transformations, and assesses its prospects, taking into account innovative factors.

Keywords: economy, innovations, transport, railways, economic classification of innovations.

No one in the country keeps it in the dark: the most important task for us today is transition of the domestic economy from energy resources to an innovative development model. Such a model can be realized only based on promising industries, «growth points», having a sufficiently high level and potential for technical and technological development. One of such industries, having high growth potential, is railway transport.

In the context of globalization, the growth of international trade, mass labor migration, the role of transport is constantly growing. A development direction, gaining pace, is transition to the export of high-value added technological transport services. Due to this, highly workplaces are created both in transport and in industry.

The need for an innovative orientation of development of rail transport, as well as the entire economy of our country, has long received, it seems, universal awareness and recognition. But practice shows that the path from awareness and recognition of the need for something to realization is often long and arduous.

To accelerate the pace of innovation in railway transport, of course, we need economic, institutional, organizational and managerial conditions. But the scientific justification as a paradigm of innovation-oriented development of the industry, and the directions of this development is very important. The monograph under review is devoted to solving this challenging task.

It should be noted immediately that although the monograph is devoted to innovative development of rail transport, its key theoretical positions go beyond the railway industry, are of a general transport nature, which is especially important now, when there are active development processes of a single transport system for integration of different modes of transport, transport science and education.

The strength of the monograph is that it integrates, reinterprets and develops the results of studies of three major scientific schools: Western economic theory and innovation economics (I. Schumpeter, S. Kuznets, etc.), the theory of «long cycles» of N. D. Kondratieff and the branch school of the economy of railway transport (T. S. Khachaturov, I. V. Belov, N. P. Tereshina, B. M. Lapidus, etc.). In addition, the monograph contains a serious economic analysis and understanding of technical and technological innovations in the field of transport.

This gave the authors an opportunity to contribute to the theory of innovative development in relation to the transport industry, with sufficient scientific breadth to look at the problem under study, as well as to offer some new, original ideas and generalizations.

An important contribution to the theory of transport innovations is the economic classification of innovations in rail transport presented in the monograph, within the framework of which various types of transport innovations are clearly defined and ordered according to the degree of «radicality», based on their impact on economic activity and social development. This classification made it possible to perform a deep retrospective analysis of innovations in the field of railway transport (starting from the history of its appearance) and to build a model of innovative development of railways in conjunction with long-term economic dynamics. This model

does not only visually reveal the close interconnection of railway innovations with world economic development, but also has a predictive value, allowing to draw a conclusion about formation of prerequisites for a new innovation wave not only in railway transport, but also in the economy as a whole.

With regard to railway transport, the authors, based on the analysis of the most important social and economic challenges of our time, formulated specific requirements for the results of innovation-oriented development of rail transport and proposed formalized criteria for selecting promising innovative projects and solutions that could provide high economic efficiency in the future.

Deep theoretical developments are supplemented in the monograph by an interesting empirical analysis. It is worth noting that the very concept of «innovation» is quite abstract and acquires a clear content only in the application to specific objects. And here it is necessary to note the extremely high scientific conscientiousness of the authors who examined in detail the specific innovative technologies offered for introduction in the transport complex (supersonic car, flying car-transformer, futuristic train-plane project and many others). This will undoubtedly serve to improve the readers' perception of the monograph, and will expand their range. But even here the authors do not confine themselves to an analysis of some spectacular innovations, but propose a clear classification of these innovations, assessing the possible impact of each of them on rail transport, and, therefore, do not deviate from the main subject of research.

In scientific work, the vector of innovative development is also not neglected, without which it is difficult to imagine transportation today – ecology and environmental friendliness. The transport complex is one of the major polluters of the environment. The types and nature of pollution vary by mode of transport, but in general, the scale of transport activity has a significant impact on nature. The phrase «green transport» has already become firmly entrenched in the conceptual apparatus of both scientists and practitioners. The authors devoted the final paragraph of the monograph to this problem. In it, the latest inventions and innovative proposals that correspond to the «ecological imperative» are again not simply analyzed, but classified according to specific areas and various aspects of significance for rail transport, which allowed the authors to make meaningful conclusions on the priority directions for improving the environmental friendliness of rail and other modes of transport.

The monograph is of interest for scientists, teachers, Ph.D. students working in the field of transport complex economics, seeking to provide a reasonable economic evaluation of the results of implementation of their developments. They will find in the book many things, that will be of real help for them. In the monograph the theoretical depth and description of technically complex innovations are combined with availability of the presentation due to the good literary style and the clear logic of the presentation of the material. This makes it interesting and useful not only for scientists and professionals professionally dealing with transport issues, but also for students, specialists in other fields, for all who are interested in innovations, history and prospects for development of railways, as well as modern trends in economic theory and practice. ●

Information about the author:

Sokolov, Yuri I. – D.Sc. (Economics), professor, head of the department of Finance and credit of Moscow State University of Railway Engineering (MIIT), Moscow, Russia, jursokolov@yandex.ru.

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