
GLOBAL TENDENCIES OF THE INNOVATIVE-TECHNOLOGICAL DEVELOPMENT

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Keywords: globalization, industrial epoch, scientific and technological revolutions, technology gap, technological mode, innovations, transnational companies, scientific and technological integration, models of the future, investment activity.

The article examines modern trends, tendencies and factors, which influence the existing paradigm of the industrial growth, accompanied by the intense extension of its resource components, and which is acknowledged everywhere in the world exhausting itself. Problems of passage to the industrial growth, relying on the scientific and technological component are stated and investigated, and corresponding background in the form of the well-developed industrial and scientific and technical potential, existence of wide layers of educated people, access to the external sources of information and capital are analyzed.

Technological progress appears the common principle of the development of civilizations, bears cyclical pattern and is conditioned by the general tendency of growth of the needs of the personality, household, country, and mankind. It provides the outrunning growth of the GDP (gross domestic product), which from epoch to epoch gets faster and faster. It is seen from the data, provided by A. Madison, about the correlation of the GDP accession rates and population for the long phase of history - two thousand years. For the latest 500 years the number of planet's inhabitants has increased 14 times, global GDP - 149,8 times, and per caput - 10,7 times. The key factor, responsible for such advance, was technological progress, development and usage of the new generations of methods and technologies.

Technological development of the society is notable for its irregularity, cyclicity, change of the phases of swift growth by the phases of stagnation, technological crises in the period of decrease of the potential prevailing technological ways of production and technological modes. Technological progress develops erratically through the change of phases of the innovative-technological breakthrough by the long periods of moderate expansion rates, stagnation, and technological degradation.

Today the development of technology is next to impossible without the new scientific ideas and its work study, as well as the scientific progress is unreal without the newest appliances, handling techniques of the acquired information. Therefore the trends of interpenetrating, integration of science and manufacture arise and start to prevail.

Regularities of the cyclical dynamics of science and technology, change of generations of machines, technological mode become more and more distinct. Transformation of science into the immediate productive power begets scientific and technological revolutions (STR).

In global technological development the following trends come out distinctly.

The first is the irregularity of the economic growth. The most important regularity of the long-term socioeconomic dynamics is the interchange of the periods of acceleration and periods of deceleration of the economic growth. These oscillatory movements are accompanied with renewals of the equipment-structures ratio of the economy and rerouting of the technological development.

The second is the increase of the technology gap between the local civilizations. Results of the scientific and technological progress in XX century were grabbed mainly by the developed and wealthy countries: labor capacity there increased 6,3 times per century, whereas in the developing countries it was only 5,9 times.

The third is the originality of the present-day stage of the scientific and technological development resides in the fact that the fundamental sciences acquire the key importance.

The fourth is globalization of science and technology, having the objective basis in terms of universality of the scientific knowledge and technological principles. It follows two main directions: commercial (in- and inter-corporation) and non-commercial (through various academic agreements and global international projects of nontrading character).

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The fifth is the increase of the importance of the companies in financing package of the Research and Development (R&D), especially Transnational Corporations (TC). Transnational corporations, connected with the hard-core of the global economical system even today control more than half of world-wide commerce and finances turn-over, the most profitable sectors in different countries, including extractive and science-driven industries, telecommunication services, production infrastructure.

The sixth is the advance of capital coefficient of the research-and-development activities that requires concentration of financial resources, assurance of functional budget sufficiency of the Research and Development (R&D), necessary knowledge and qualification potential underway the new product line. Today the Research and Development budgets of the larg-

est companies in full sizes exceed the total of the countries expenses on the Research and Development (R&D).

The seventh is the integration processes advance in the Research and Development (R&D). High capital coefficient predetermines the development of cooperation for the division of the growing expenses and risk of innovations. Under the circumstances arises the necessity of strategic cooperation of the specialist companies, universities of one or several countries for the purpose of the expenses division and decrease in risk for the most successful campaign against the business rivals.

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Received for publication 07.07.2009