Emilian Dobrescu

RITMUL CREȘTERII ECONOMICE

(The Rate of Economic Growth)

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The publication of prof. dr. Emilian Dobrescu's work, devoted to one of the most current and interesting problems of economy — the rate of economic growth — affords us the occasion to notice that our economic science and particularly the domains where it overlaps mathematics and statistics, constituted as separate disciplines, such as mathematical economy and statistical economy, respectively, are enriched by a new work of actual value.

It is well known that ever greater attention is granted in the world scientific literature to the complex problems forming the research subject matter of those disciplines. In Romania too, the application in the domain of economy — as auxiliary instruments — of the exact investgation methods offered by the apparatus of modern mathematics and, particularly, of mathematical statistics and the introduction of electronic computation techniques, have been a powerful stimulus in the creative work of scientists, of research workers in economy and mathematics, as well as of other specialists directly linked to the sphere of material production. The present work, whose characteristic features we shall endeavour to present briefly hereafter has apperead within the context of this ample activity of fundamental and applied research.

In our opinion, this work is particularly interesting for an ever increasing number of mathematicians who, in their activity of scientific research, coupled with their didactic activity, also take an active part in turning to account in economy the modern computing and analyzing, predictive and managing methods. The fact of primordial importance disclosed to this category of research workers is that the investigation of the rate of development is not only a matter of pure mathematical technique, of expressing the intensity with which various quantitative indicators of economy vary, omitting or neglecting its qualitative aspects and elements, particulary the structural ones.

In contrast with the strictly mathematical manner of aproaching and defining the concepts of rates of growth, with the dual facets of technological growth rate (α_0) and economic growth rate (β_0), of accumulation, as the problem is set, for instance, in the generalized model of economic development conceived by J.V. Neumann for the conditions of the capitalist type mode of production, the author is well justified in presenting

another outlook on economic development, a broader outlook, generalizing theoretically and reflecting the intensity of this development, in its whole, with its various quantitative-qualitative aspects, such as the volume of production and of national income, their level per inhabitant, the variety of the manufacturing assortment, product quality, structure of economy by branches, etc.

This multilateral approach of the problem of the rate of economic increase has the advantage of avoiding partial, unilaterally limited appreciations on the dynamism of economy. The author points out that, consequently to this broader significance, the methods for expressing statistically the intensity of economic development have become more diverse, if various meanings of the concepts analyzed being linked to them concomitantly. The ideas expressed by the author with respect to the defining elements of the category of optimal rate, expounded by the author, stand out conspicuously. In our opinion this category is fundamental in the conditions of the constant improvement of our socialist economy. It is undisputably linked to the application of the methods of mathematic modelling to planning; the optimal rate of development, as it is defined in the economic-mathematic modelling properly computed, will provide with a much more comprehensive and adequate expression the actual processes and phenomena in the framework of socialist reproduction, on an expanded scale, as well as the development of productive forces in the conditions of the economic optimum and of a lasting balance, and of achieving a correct correlation between accumulation and consumption. In short, the concept of optimum rate should be closely related to the social economic system and to the social relations which bear an influence on it.

All the other problems of general methodology and of quantitative analysis, which the author investigates in the first and second part of this work, are also interesting for mathematicians. We hereby refer to the problems concerning social product and national income, economic optimum, mean rate and its determining factors, reproduction of fixed assets and correlation between accumulation and consumption, as well as to the structure of national economy.

The author re-examines almost integrally the result of investigations recorded in all these problems both in Romania and on a world scale, amplifying them considerably and studying them thoroughly. The reader will particularly notice the rigorous formulation as well as the most subtle shades in the interpretation of phenomena and complex processes which occur in national economy.

This work is particularly praiseworthy due to the fact that it succeeds in conspicuously emphasizing the manner in which the application of mathematical methods in the investigation of the economic category of the rate of growth, and of other categories related to it, lead inevitably to the disclosure of new quantitative relations, to new concepts and hence, implicitly, to a deeper knowledge of the economic processes and phenomena. Thus, the mathematical methods contribute, on a heuristic plane, to the progress of economic science itself, and this is particularly made conspicuous for the economists.

Numerous illustrations may be given in this sense. We shall, for instance, refer to the conclusions reached by the author as to the definition and computation of the social product. Two distinct forms of actual manifestation of the social product are presented, viz., the total social product and the final social product. Both are necessarily suggested concomitantly with the adoption of a superior mathematic investigation method of social production, known under the name of interbranch balance (input-output). This excellent instrument of economic analysis, particularly in socialism, implies by its very contents the ascertainment of the forms of manifestation of social production. It is obvious that the specific character of these forms further conditions the course of their use as instruments for organizing and planning socialist economy.

After discussing the problems dealt with in the first two parts, the author uses the results and the conclusions he has reached,for immediate application. Stress is laid on the high rate of development of Romanian economy during the years of socialism and particularly at the present stage.

This manner of systematizing the material rigorously follows the dialectic path of knowledge — that of gradual progression from abstract to concrete — with all the advantages deriving herefrom for scientific research activity.

A happy idea was that of completing the work with two working appendices related to the carrying out of adjustment procedures of dynamic sets and with the computation of the rate of growth by the method of the parabolic mean, as well as with an appendix in which the content of the work is summarized in English, French, German and Russian.

In conclusion we must again stress the fact that this work represents a valuable contribution to the elucidation of some important problems of mathematical economy.

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