

# PARADIGMS OF CONTEMPORARY SOCIETY PROGRESS\*

Ion POPESCU\*\*

The prestigious publishing house Victor has published a new reference work, acutely claimed and expected by university, master and doctorate curricula and by the requirements and standards that must guide the teachers (or trainers) in higher education expertise. In this regard plead undeniable facts as: the complexity of economic and social development, the unprecedented dynamics of science and technology, the systemic character of evolutions in nature and society and the amplification of the challenges to growth and development in the current century and millennium.

From such a perspective, the systemic, holistic vision, the encyclopaedic spirit and, why not, the interdisciplinary analysis that characterizes the cultural matrix of the two professors, known for their accuracy and their performance in academic scientific research and university management, with elegance and clarity of speech and the philological accuracy of expression stand at the basis for achieving a highly valuable original work for the theory and practice, best of my knowledge, the first of its kind in Romania. I am also pleased to note the logic underlying the structural architecture of the work, after being presented mathematical and physical models used in the analysis of traditional economic phenomena and processes, casting their evolution (Chapter 1), below are examined pragmatic, applied, manufacturing and growth models such as the model of Keynes, Harrod, Clark's accelerator, Domar's investment productivity, or Cobb-Douglas production functions (Chapter 2 In the third chapter the authors performed a review of the strengths of econometrics as a hypothetical mathematical tool for projection and interpretation. In the fourth chapter they mentioned econophysics' pioneers, among which the Romanian scientist Nicolae Georgescu-Roegen. At the same time they treat the fuzzy lot

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\*\* PhD, Engineer, Economist, Hyperion University of Bucharest, 169 Calea Călărașilor, St., Bucharest, Romania.

theory and their role in economic design. In the fifth chapter are assessed two relevant models: one named economic amplifier, inspired by the amplification ways achieved with bipolar transistors, based on assimilation and implementation of investment similarly to the amplification ways; by econophysics reasoning, is proposed the amplification beta-economic factor found (in the previous chapters) to the classical models for identifying the disturbance vectors (inflation, the intensity of amplification, the degree of openness and assimilation of products by the consumer etc.). The other is the field effect transistor model, operating in a single class of carriers: electrons for physics and currency for the economy. It is proposed an indicator that characterizes in order to ensure the coherent functioning of the financial media. The authors assert that the extreme form of the two categories is the economic laser, phenomenon with major effects in special circumstances similar to the totalitarian environments. The teachers Ion Spânulescu and Anca Gheorghiu found the econophysics perspectives for Keynesian multiplier, Harrod-Domar's investment model and for Cobb-Douglas production function. The microeconomic and macroeconomic testing of the statistical models of the Romanian economy, both are increasing the value of the work. Finally in the sixth chapter are advanced some qualitative models, including the migration of population's phenomena. Unlike other researchers and authors who have developed gravitational models the teachers Anca Gheorghiu and Ion Spânulescu propose a bold electrostatic model in which small values carriers and developers are attracted by the large values centers.

Although the name "econophysics" involves a high degree of generality, being a border science between economics and physics, limiting its application only to statistical physics in economics seems to be too restrictive. To their credit, the authors explore other areas of physics and even economics where the similarity of the processes inspires and facilitates the adoption of new econophysics models. For example, in econometrics, creating econophysics models applied to different economic phenomena and processes such as investment, production and marketing of goods, transport, services, tourism etc., the proposed models are based on physics phenomena, especially electronic, solid physics (transistors), reliability and electricity.

It is remarkable the focus on issues expansion, according to the practical and theoretical importance and consequences presented by the economic amplifier (transistor) model. Such an approach is justified by the role of this concept in economic science and practice especially in problems solving concerning economic growth and development, such as amplification of manufactured goods quantities, products, services, etc. obtained by specific

processes for each economic sector, with the phenomenon of physical and electronic amplification. As a product of the application of natural laws in physics, the transistors electronic amplifier, constitute a guarantee for the objectivity of the chosen version to express the desired economic reality.

The chapters on the statistics of charge carriers analyze the phenomena of electricity, thermodynamics, solid state physics, electronics, etc. from a phenomenological and statistical point of view (when working with large numbers of constituents or sub-microscopic particles: atoms, electrons, molecules). Finally the authors stop to the phenomenological aspect, outcome or overall picture of the observable economic process or phenomenon, palpable at the macro level.

