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Article

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Theoretical Economics Faces a Serious Challenge

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After the erosion of the collectivist ideology twenty years ago, post-communist Central and Eastern European countries set out to transform their economies into a market system. This historically unprecedented process was accompanied by a unique transition from an authoritarian political system into democracy. However, this process of economic transformation was symptomatic of a complete absence of any theoretical guidelines and recommendations.

Twenty years later, a financial and economic crisis has clearly uncovered the failures of current economic paradigms in today's global environment. In other words, both the liberal and Keynesian approach to an economic policy have failed to recognize serious imbalances, to prevent critical phenomena from spreading, and to limit their destructive power in the world economy as well as in the individual national economies. Therefore, a growing number of economists are calling for a set of tools necessary to tackle acute situations in the economic field.

Under these circumstances, Hayek's question (1995) gains an ever greater significance: Is it not necessary to start with theoretical economics from the beginning? Should we go back to the elementary philosophical and methodological categories and start from Descartes' basic and undisputable axiom: "I think; therefore, I am"?

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In general, knowledge, or rather ways of knowing are more difficult to discern and to capture in the social sciences and in the humanities than in specialized scientific fields. Theoretical economists have been trying to develop general methodology; however, it is very difficult for them to affirm their theories with a dose of exact measurements. For example, when a scientist analyses a physical, chemical, or a biological phenomenon, he or she may have a whole range of parameters at hand such as temperature, velocity, gravitation force, etc., which can be identified, isolated, measured, and replicated. The same approach, however, does not apply to the humanities or the social sciences, which make research in these fields hard to measure, rely on, and verify. As Hayek (1995) states, "Research in social sciences does not deal with relationships among things, but with relationships between people and things and among people themselves. They deal with human activity, and their aim is to explain unintentional results of many people, when we describe the difference between natural and social sciences, it is best to call the social sciences and humanities approach objective and the natural scientific approach objective."

Moreover, some technical scientific fields such as mathematics and cybernetics are not dialectic which is supported by the statement that each thesis contains its anti-thesis. Due to the absence of this dialectic, these sciences are limited in helping theorists solve issues in the social sciences/humanities, particularly in relation to the prediction of future phenomena or states of existence. The basic methodological problem then follows: How can we make the future a subject of exact scientific research when it does not exist as such?

As a result, research in motives, interests, and preferences in the behavior of participants in the market interaction which shows strong informational asymmetries falls in the global era under the "soft" disciplines such as psychology and sociology. Therefore, when analyzing socio-economic decision problems, in which the outcome is dependent on unidentifiable states of the world, it is important to use subtle, often mutually opposing methodological approaches with the awareness that each controversial solution may result in direct pragmatic and philosophical consequences. Mathematicians, statisticians, probability theorists, and decision analysts all differ in what kind of advice to give to a practitioner in specific situations. Simply stated, there are two poles of the opinion spectrum: first, the Bayesians, i.e. the subjectivists, who use the subject's feelings and intuition in the formal analysis of decision

problems; second, the non-Bayesians, i.e. the objectivists, who believe it is best to omit subjective aspects from a formal analysis; they are to be used only to bridge a gap between reality and objective results which we reach via the use of a formal model.

In addition, in his Petersburg paradox, D. Bernoulli proved that people do not make decisions based on mathematical recommendations; instead, they turn to individual functions of "utility" and to the amount of their aversion to risk on one hand; on the other hand, they incline to exaggerated optimism in insecure times as in the case of price bubbles on financial markets. F. A. Hayek (1995) eloquently describes this situation as follows: "A concrete understanding or a way of knowing adhered to by a particular group of people never presents a consistent and coherent whole."

As a result of difficulties with predicting economic phenomena in the world as defined in Friedman's positive economics, it is questionable to what extent a social science such as economics can be defined as a "soft" or "hard" scientific discipline. While the socialist ideology considered economics a verbal science without solid laws with a high degree of ideological subjectivity, the rest of the world, following the principles of Professor Samuelson, preferred higher levels of quantification and practical verifiability of formal statements, i.e. a more rigorous, axiomatic notion of science. Nonetheless, this dichotomous problem prevails and this conflict, in economists' views, has been growing. According to Cassidy (2009), it is a mistake to believe that people are rational players who optimize their economic interests and whose behavior can be fitted into exact mathematical equations. On the other hand, without integrating mathematical thinking into the process, one cannot objectively structure a decision problem and, it follows, make a relevant conclusion in support of the particular decision.

Economic theorists have been unable to find an adequate synthesis of both the subjective and the objective approaches in terms of methodology which directly affects an economic policy. Unfortunately, analogical procedures and methods such as the ones used to find solutions to technical issues or to answer scientific questions cannot be applied to an often conflicting decision-making process of individuals and state officials.

Ambivalence of these methodological questions holds true for the period of the above-mentioned transformation process of post-communist economies as well as for the current economic crisis. Their common denominator is the obvious insufficiency of the current economic theory in such extreme situations. This methodological problem of normative prediction of the future development has been stressed in the last decades as a result of the world economy malfunctioning and of the poor performance of the financial market segment, heavied by high volatility, which eventually ended in the current economic crisis. Thus, the current crisis proves that the financial market segment is susceptible to an [1]enormously subjective behavior of all participants; due to a high level of autonomy and interconnectedness, information is becoming extremely non-transparent and highly asymmetrical; therefore, it endangers rather than helps real economies.

Nevertheless, financial institutions, primarily the banking sector, represent the backbone of any economy, and their privatization becomes crucial. As opposed to the majority of other post-communist countries, the post-1989 transition of the Czech economy from the "command-and-control" type towards a market trajectory (the Czech Way) was characterized by a specific type of privatization and transformation costs coverage.

In most post-communist countries, the transformation process was accompanied by a strong inflation. Therefore, those whose savings and other financial means were devalued bore the burden of the transformation process. The Czech Republic was one of the few countries that kept its currency development under control; transformation costs had to be covered through other means, mainly via the Czech banks. New banking entities often granted poorly guaranteed loans to privatizing agencies and individuals. Thus, the banking sector faced financial criminality. In order to shorten the hybrid transition period, legislation was adjusting to the hectic pace of this transformation. Likewise, the legislative mechanism was not ready intellectually and methodologically for this rapid transformation. Serious transition problems in the "microsphere" then poured over into the undercapitalized banking sector which led to losses suffered from the debtors' insolvency. The banking crisis in the Czech Republic first hit small and medium-sized banks and

[1] T. Bayes is an author of the Bayes' rule which uses conditioned probabilities to show probability statements based on the subjects' feelings.

later on even big banking institutions in connection with an overall economic crisis between 1997 and 1999 when companies' ability to pay off their loans was hampered and banks were forced to make corrections to their original lending policies. Nonetheless, efficiency counts show that the Czech way of covering these transition costs was the cheapest. Comparative analysis results clearly point out that the whole transition process in post-communist countries as stated in Ševčík (2010) was not supported by any major theory; instead, it was based on experience and on conflicting decisions of individual economic entities and state authorities as related to a selected economic policy.

In the decade preceding the current economic crisis and despite the non-dialectic scientific discipline such as mathematics, analysts tried to make predictions about the economic future using mathematical models. At first, their data seemed clear-cut and significant. However, their data were a mere alternative of prolonged quantities used under the conditions of the past system which no one has yet been able to use for the future. In today's economic world, analysts enjoy a highly-respected position due to assessing both the outlook of a subject's economic solvency and the financial instruments which significantly affect the mood on financial markets.

The aim of using mathematical models is to objectively structure a problem by simplifying reality. A model which does not simplify reality loses its meaning; under such conditions, one might be able to work with reality directly which turns out to be impossible in today's global economic world. On the other hand, oversimplification of the "green tree of life" presents another serious issue in terms of practical model applications. Furthermore, even if the best model is used to capture reality, there will always be the unformulated rest of various states of being and other phenomena. Consequently, a phenomenon with a low probability of occurrence, which may have been ignored in the original prognosis, may turn up.

Insufficiency of predictive mathematical models which are derived from non-dialectic ways of knowing have eliminated the occurrence of less probable states of being and phenomena. According to today's mainstream economic theory, math contribution to structuring and predicting of economic phenomena has been overvalued and, as a result, has become a catalyst for the crisis phenomena. The belief in mathematical models has enabled a wide spread of structured and

securitized certificates and bonds. Famous David X. Li's mathematical model which was taken over by renowned rating agencies predicted probable that all the underlying assets of an innovative instrument would show the same signs of payment insolvency at one particular moment; the equation at the level of mathematical elegance showed that the market considered security solvency to be the best indicator since "the market takes care of itself." It is evident today that the market was not the best indicator and that in the case of innovative instruments diversified risk was replaced by systemized risk. Again, this example shows that a mathematical model cannot replace a qualitative and historical analysis of possible states of existence. Clearly, a rigorous approach to an economic analysis needs to be complemented with a qualitative and historical analysis.

Even though the economic crisis has proved inefficient state interventions in the form of mandatory implementation of regulatory projects such as Basel and Solvency and other mathematically based models, the current economic practice intends to continue these interventions and to make them more widespread.

The cardinal question then remains: Are some economic paradigms generally valid? If so, do they apply to the financial markets? The latest development suggests that current financial markets in the global era are so specific that Smith's invisible hand cannot assert itself against these specifics and that a Keynesian type of state intervention is unsuccessful as financial markets influenced by such state intervention do not tend to bounce back. Answers to the "the market will take care of itself" question and the Keynesian-Samuelson problem mathematization have both failed in light of today's crisis.

According to M. Friedman (1992), the limit of human knowing and understanding is a product of an individual genius and of a firm belief in minority opinion and in the social climate which allows diversity. Economics has been waiting for its own genius to formulate economic paradigms for critical issues in the global era.

References

[1] Cassidy, J. (2009): *How Market Fail: The Logic of Economic Calamities*. New York, Farrar, Straus and Giroux, 2009.

[2] Freidman, M. (1992): *Svoboda volby (Free to Choose)*. Praha, Liberální institut, 1992.

[3] Hayek, F. A. (1995): *Kontrarevoluce vědy (The Counter-Revolution of Science)*. Praha, Liberální institut, 1995.

[4] Kovanda, L. (2009): *Příběh dokonalé bouře (Story of Perfect Storm).* Praha, Mediacop, 2009.

[5] Ševčík, M. (2010): *Transformační proces v ČSFR (ČR) a jeho náklady (Transform case and costs).* Praha, University of Economics, 2010, Habilitation thesis.

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ABSTRACT

The authors of the article point out that the theory of economics has failed to yield a solid theoretical background in such critical situations as the transformational period of post-communist economies and the period of the current financial and economic crisis. While classical liberal or Keynesian concepts are failing, theorists cannot look to mathematical modeling for help. The challenge for today's theoretical economists is to find a new concept for today's global era.

Key words: Determinism of stage of the Word; Decision making of economic subjects; Multifunction of mathematical models; Regulatory on financial market.

JEL classification: D740, D810, D820, G22.