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The game theory, economic behavior and interpersonal meta-relationships

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Abstract

The article considers the interrelation between economic behavior, game theories of games and human psychology. The irrationality of human activity in the sphere of economy leads to crises and problems. The formation of meta-relationships makes it possible to control economic decisions. This interaction leads to mutual economic success. The interpersonal meta-relationships balance the game theory in economics, mathematics, and psychology.

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1. Introduction

Modern society is a social structure pervaded by economic laws and patterns that form respective traditions, practices and social behavior stereotypes. Crises and financial instability in a country create the environment for the negative reaction of citizens, while the rising standards of living and economy stabilization promote positive social climate. Economists and social scientists see close interconnection between the economic achievements of a state, the productive activity of people, their state of mind and behavior (Argyle, 2002; Schultz, Schultz, 2010). In the present article describes the preference of interpersonal meta-relationships in economic behavior of people.

Social environments with high per capita income also go together with friendly social and psychological atmosphere, high workplace safety standards and low crime rates. The “Economic literacy” of citizens is

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characterized by high-level financial abilities and skills that enable people to increase their personal income and profit. Thus, the economically oriented behavior originates in society, and reflects all new social trends and patterns. The birth of «homo economicus» within a society presupposes the formation of consumer behavior strategies, as well as purchase, acquisition and possession principles (Fromm, 1976). Economic behavior becomes the predominant feature of modern society, while interpersonal relations increasingly become market-oriented. The idea that everything is for sale and anything can be bought turns out to be a principle of social and interpersonal interaction. Capital, cost, value, exchange, investment, and profit are no longer only economic concepts, but they become a part of daily routine. The concepts create the environment where a person can be evaluated and where he gets some «measurement», cost and «price». A person is transformed into «human capital» that can be allocated and invested in order to get income and profit (Becker, 1994). This environment also embraces human emotions, feelings, experience, thoughts and ideas that become pragmatic, rational and materialistic.

Since commodity-money relations have appeared in society, an individual has been their constituent and integral part. Thus, market laws, principles and patterns have started to function. A person is involved in them by other people interested in gaining profit and material wealth. Competitive conditions emerge while struggling for material goods and values. Once the participant of this struggle gets the dominance, he or she gains a higher social status, material wealth and affluence. The actions and steps of the participant concerning exchange, sales and purchases suggest complex mental operations and substantiated logical decisions to be taken, also expected result to be achieved.

At the same time, the universal and comprehensive nature of economic laws exceeds the bounds and limits of personal existence. They are independent and work beyond a person. As a result, it loses its foreground in society and gets the status of a «tool», a mechanism that makes these laws operational. The dependence on transpersonal laws results in exonerating a person from any economic responsibility for the consequences of his or her actions and deeds. Thus, financial crises and market instability that emerge in society turn out to be the results of external forces and conditions, whereas internal factors make many people keep looking for the ways to control social and economic laws and predict financial problems. Scientific studies and achievements in the field of economics of recent years clearly confirm such a tendency (Becker, 1994; Kahneman, Tversky, 1979; Schultz, Schultz, 2010).

Social and economic forecasting is based on economic, mathematical, psychological and other social models. Each of the models sets its own scientific priorities and principles that define the course of social developments and phenomena. As a result, a specific map is created to project future social developments and financial crises. The projects form response strategies for social institutes: national agencies, civil society organizations, large corporations, small groups and a family as well. On the basis of the obtained results, the participants of social and interpersonal relations strive to optimize their behavior. Nevertheless, quite often the provided forecasts turn out to be uncertain, as these do not take into account various external factors that influence social processes.

The game theory as a mathematical model for the settling of conflict situations has started to be applied for the analysis of crises in economy and financial markets (Aumann, Hart (Ed), 1994). It provides additional information and possible ways of complex social and economic situations development. Besides, it provides the analysis and study of optimal strategies for business decision-making in times of financial risks and uncertainty. Mathematical game model clearly shows the dependence of the ongoing economic processes in a game on the actions taken by players and on their future wins. At the same time, actions and deeds of game players are supposed to be rational, reasonable, logic, and should be based on precise mathematical calculation. The correctness and accuracy of calculations of other game player behavior strategy predetermine the winning of one of the players.

Another important game factor is the antagonism of players, i.e. from the very beginning of the game each player defines others as competitors. Mathematical game model originally envisages conditions that result in the opening of a conflict and conflict relations. The growing struggle and competition among game players demonstrate tense interpersonal relations and reveal the confrontation between them. Thus, the psychological aspect of human economic behavior emerges. The former consists of behavioral, cognitive, emotional and will components, the successful application of which leads the player to winning or losing the game. However, the game must be held according to specific rules, that is the system of conditions regulating possible variants of player actions; the amount of information on the behavior of the other party of the game; the result of the game reached after each and every combination of moves (Aumann, Hart (Ed), 1994). As a result, it becomes possible to dwell upon the certain artificiality and simplification of an economic situation mathematic model. Moreover, it does not take into account

peripheral social factors and psychological mechanisms. Thus, optimal player strategies are conditioned by the rules of the game, while the winning of each player depends directly on correct calculations, the ability to reason and make decisions.

In the real market situation with its instability and variability, the ability of a businessman to reach financial success depends on the ability to handle a great amount of data reflecting a diversity of economic processes. The knowledge of numerous indexes and characteristics, that need to be analyzed and interpreted, predetermines the considerable complexity of human mental activity, the ability to solve logical problems and take important decisions. A game that simulates economic situations is limited by the framework and conditions of a mathematical problem, the ways and methods applied to solve it, as well as by the artificiality of the matter. As a result, the game model turns out to be less effective in the situation of financial risks, as it cannot be used to analyze real, vital business situations. Thus, there is a need to look for new, more effective ways to solve current social and economic problems.

Leading experts start to pay increasingly more attention to irrational aspects of human economic behavior when they make decisions (Kahneman and Tversky, 1979). Irrationality becomes the mechanism that preconditions the rise of crises and market problems. From a rational point of view, a person must take actions that are logically substantiated and related to making serious economic decisions. However, the human pursuit of short-term benefit and illusiveness of profit and losses minimization often come in contradiction with the logically justified economic laws. The «human factor» acquires its own social meaning, creates uncertainty in the economic situation and triggers the mechanisms of emotional response. At the same time, such actions in some cases lead to financial success. The reasons for that success cannot be explained by mathematical logic.

In psychology, unlike in economics and mathematics, the emotional aspect of human behavior in complex conditions of his activity is the subject of scientific research. Therefore, a person and his or her actions have originally been defined as irrational and depending on mental state, past experience and specific features of mental activity (Berne, 1964). This behavior most vividly manifests itself in a game that is different from reality. The play activity of children presupposes that actions and behavior of a child originate in a fantasy world. This world is based on fantasies, emotions, feelings and affections. This is the way a child gets experience of social adaptation and adjustment. The game becomes the sort of a model of reality and, therefore, taking part in it, a person learns to act in the real world.

At the same time, the game presumes the existence of certain rules and a «script» that establishes the sequence of actions and moves of players (Berne, 1964). When joining the game world, a person plays a particular social role and «wears a mask», which he or she will have on in the course of the game. Thus, in the game situation becomes ambivalent and ambiguous, and reality and unreality interlace there. In contrast to the game mathematical model with its rules limiting the actions of participants, the game in psychology suggests that emotional reactions are numerous, various and spontaneous. Interpersonal relations among players become emotionally intensive and targeted. The psychological study of game activities and player behavior is determined by the individual analysis of each player's actions and moves. Together they form a space of interaction and reciprocal influence. The sociometric matrix vividly demonstrates their structure, as well as positive and negative aspects of relations (Moreno, 1959). The main impediment to the application of psychological games in economics and mathematics is not the absence of a precise mathematical analysis, but the isolation of each of the players. In game psychology, researchers often pay attention to each player individually, and the latter gets the status of the «object» of a scientific research. As a result, we lose some psychological characteristics and personality traits.

This scientific problem can be solved by means of game psychological analysis, where all the participants get the status of «subjects», and their relationship start to acquire a meta-character. Players' actions and moves are interconnected, i.e. they determine not only their own reactions, but also the reactions of other players. In addition, they influence the changes of the social situation of interaction. As a result, meta-relationships appear, and these could be described as a kind of some social and psychological space where each participant stimulates the progress of another player. These stimulations and investments are aimed at obtaining their own profits, also the benefits for another participant and the achievement of mutual economic success (Dedov, 2015). As a result, the irrationality of economic decisions of an individual turns out to be under joint control. In addition, it becomes possible to carry out the precise mathematical analysis of economic activity and human behavior.

Thus, interpersonal meta-relationships balance the game theory in economics, mathematics and psychology. The create prerequisites for emergence of the new theory of research of behavior of the person in society.

References

- Argyle M., (2002) (2 th). *The Psychology of Happiness*. London & New York.
- Aumann R.J. and Hart S. (Ed), (1994). *Handbook of Game Theory with economic applications*, Vol. 2. Amsterdam – Lausanne – New York – Oxford – Shannon – Tokyo: Elsevier.
- Becker G., (1994) (3 th). *Human Capital*. Columbia University Press, New York.
- Berne E., (1964). *Games People Play (The Psychology of human relationships)*. New York. Grove Press.
- Dedov N., (2015). Role of meta-relations in economic behavior of people. *Psychology of Economic Self-Determination of Person and Community*. Proceeding of the III International scientific and practical seminar. Chisianau, pp. 8-9.
- Fromm E., (1976). *To Have or to Be?* New York: Harper and Row.
- Kahneman D. and Tversky A., (1979). Prospect Theory: An Analysis of Decision under Risk. *Journal of Econometrica*, Vol. 47, No 2, pp. 263–292.
- Moreno J.L., (1959). *Psychodrama*. American Handbook of Psychiatry. Vol. 2. New York.
- Schultz D., Schultz S., (2010) (10th ed). *Psychology and Work Today. An Introduction to Industrial and Organizational Psychology*. Upper Saddle River, New Jersey: Prentice Hall.