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Стаття надійшла до ред.
03.05.2012 р.

THE EVOLUTION OF RESEARCH OF RATIONAL ECONOMIC BEHAVIOR

UDC 330.16

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This paper selectively analyzes the parts of the respective discussion on the human "nature", as a new psychological and genetic basis for understanding the economic behavior of people. This discussion supplements the neo-classical, new-institutional and other researches of rational economic behavior. The scientific importance and practical timeliness of cognitive and psychological analysis of rational economic behavior consists of formalized research modeling, which have undergone experimental and empirical verification in certain and various situations in economic realities. Its hypothesis is that people and their psyche are characterized, apart from the theoretical epithets which are being attached to them by particular economic theories ("economic" and "institutional" man), by a smaller or greater degree of "natural irrationality" associated with the individual-social contradictions, which are immanent in humans.

Key words: choice, rational economic behavior, rationality of economic subjects, rationality, substantial rationality.

ДО ПИТАННЯ ЕВОЛЮЦІЇ ДОСЛІДЖЕНЬ РАЦІОНАЛЬНОЇ ЕКОНОМІЧНОЇ ПОВЕДІНКИ

УДК 330.16

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Проаналізовано сучасну дискусію про природу людини як нову психологічну та генетичну основу для розуміння економічної поведінки людей. Ця дискусія доповнює неокласичні, неінституціональні та інші дослідження раціональної еко-

номічної поведінки. Наукове значення і практична своєчасність когнітивного і психологічного аналізу раціональної економічної поведінки полягає у формалізованих дослідженнях і моделюванні, які пройшли експериментальну та емпіричну перевірку в різних ситуаціях економічної реальності. Гіпотеза такого підходу полягає в тому, що люди і їх психологія характеризуються не тільки загальними теоретичними рисами, які надаються їм у теорії економічної та інституційної людини. Також має місце, більшою чи меншою мірою, природна ірраціональність, пов'язана з індивідуально-соціальними протиріччями, які іманентно присутні в самих цих людях і їх взаємодії з оточенням.

Ключові слова: вибір раціональної економічної поведінки, раціональність господарюючих суб'єктів, раціональність.

К ВОПРОСУ ЭВОЛЮЦИИ ИССЛЕДОВАНИЙ РАЦИОНАЛЬНОГО ЭКОНОМИЧЕСКОГО ПОВЕДЕНИЯ

УДК 330.16

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Пронализована современная дискуссия о природе человека как новая психологическая и генетическая основа для понимания экономического поведения людей. Эта дискуссия дополняет неоклассические, неинституциональные и другие исследования рационального экономического поведения. Научное значение и практическая своевременность когнитивного и психологического анализа рационального экономического поведения состоит в формализованных исследованиях и моделировании, которые прошли экспериментальную и эмпирическую проверку в различных ситуациях экономической реальности. Гипотеза такого подхода заключается в том, что люди и их психология характеризуются не только общими теоретическими чертами, которые придают им в теории экономического и институционального человека. Также имеет место, в большей или меньшей степени, естественная иррациональность, связанная с индивидуально-социальными противоречиями, которые имманентно присутствуют в самих этих людях и их взаимодействии с окружением.

Ключевые слова: выбор рационального экономического поведения, рациональность хозяйствующих субъектов, рациональность.

The idea of rational economic behavior of people in the system of market economy of any type is very important. Because the forecasts or different sorts of consequences of certain relations or, for example, economic policy measures are possible only when it is assumed that people will behave rationally. Hejne [1] wrote two decades ago that "if people would not provide clear rationality, but favored a temporary fashion through coincidences and useless actions, economic theory would lose its power of prediction." In practice, the choice is realized in terms of risk and uncertainty, giving preference to one of several alternatives. Sometimes decisions are made without thinking, automatically by a routine behavior which was created through many years of practice [2; 3]. There are decisions to which the individuals do not attach

greater importance and give very little attention during the election, but also there are decisions that need long-term thinking, because the choice has a unique character. It is the uniqueness of the situation in which the choice is made, an insufficient definition of the consequences of its decisions and the existence of a set of heterogeneous influence factors that must be taken into account.

The question of rationality of economic agents is one of the most contentious questions in modern economic theory. In multi-decade mainstream dominance of neo-classical theory the assumption of rationality has been one of its central categories. As a theoretical hypotheses it is related to the fact that people always clearly understand their goals, they unambiguously rank them according to their own preferences and tend

to their satisfaction. This is an instrumental rationality, that is the assumption of neoclassical economics that made it a theory without the institutes... Incomplete information and limited mental capacity by which we are supposed to process information are defining the transaction costs that make the formation of the institute. Respective neo-institutional theory has significantly and multidisciplinary expanded the aspects of economic analysis, but did not significantly impinge on the assumption of complete rationality. However, the new institutional economics has focused on the above postulate as well as introduced the concept of incomplete or limited rationality. The idea of limited rationality involved three assumptions, namely:

a) human ability to define goals and calculate the consequences in the long term is limited;

b) economic entities are trying to achieve their goals gradually, not immediately;

c) they are trying to achieve a certain level of their goals, rather than their maximization.

The following hypotheses on the lack of rationality, is the so called substantial rationality, which is partly in contrast to procedural rationality. It is believed that an individual achieves goals while respecting the costs of decision-making and information processing. The difficulty at the stage of collecting and analyzing information is caused by the inability to use the existing information when making economic decisions. Therefore, the experience, intuition, etc. are partially being used, and the profit is less than the maximum possible (ideal). Later its modified version, was also developed according to which rational behavior is more a course of action, rather than utility maximization in the jargon of classical theory. The reason for this is that the market accepts all agreements that bring profit, regardless of whether it is maximal or not.

Regardless of the periodically dominant mainstreams (main directions), economic science has never presented a unified theory. It has always been a set of different scientific approaches (directions, schools), whose leading representatives and their followers gave their own analysis (events, occurrences, actions and processes), of economic realities, as well as appropriate recommendations for economic policy and its management. During the last 20 years the route known as behavioral economics (the theory of economic behavior - hereinafter referred to as TEP) has strengthened as a new way to study economic phenomena. It is the introduction and application of psychological research in the field of economic theory, which gives specific interpretations of the behavior of economic agents in markets where the cognitive abilities of individual subjects are limited, that is why they have difficulties in decision – making.

This is an opportunity to point to three facts: first, – that a long time ago Samuelson [4] indirectly pointed to the desire to develop a theory of consumer behavior without signs of category of benefits, second, – that

many economists have known for decades strictly denied psychological role of assumptions and third, – that for a long time even Hicks's [5] remark regarding the importance of human characteristics and cognitive processes that occur in their minds during the elections, which should complement the econometric models was not respected. It would be unjustified to neglect the fact that Adam Smith wrote the book "The theory of natural feeling," in which he discussed the basics of human behavior that can not only manage their personal interests, but also other motives such as the principle of naturalness.

Only in the last decade the interest has sharply increased, and with it, the importance and popularity of research conducted by TEP, especially in terms of compounding and the volatility of economic reality, which is full of risks and uncertainties. Development of formalized models of individual behavior in different situations of choice, the real foundation of assumptions of analysis and their empirical and experimental verification have made possible the increase of ability of explanation of traditional theory. Also it does not negate the individual achievements of the neoclassical school (utility maximization, general economic equilibrium and efficiency), but only reduces the boundaries of their abstractness. Representatives of the TEP have accepted the opinion that there are three valid criteria (generality, convenience and reality), which show the solidity of competing economic theories [6; 7 – 9].

The pioneer introduction of experimental methods in traditional economic methodology contributes to this, for which Smith received the Nobel Prize in Economics in 2002 [7; 8]. One of the most significant results of experimental studies is discrediting the orthodox theory of expected utility by Von Neuman and Morgen-Stern and the theory of subjective expected utility by Savage.

Representatives of the TEP have set themselves the task to eliminate the discrepancy between normative and descriptive analysis of economic relationships. In this way they gradually revealed many paradoxes. In the field of rational choice theory they explored the foundation of the principle of maximization, the axioms of the theory of the expected, subjectively expected and discounted utility, comparing them with experimental data which they discovered. In this context, there are significant pioneering works by Simon, Allais, Markowitz, Ellsberg, Strotz, Nisbett, Ross, Kahneman, Slovic, Tversky, Fishburne, Loewenstein, March, and others [10]. The works of most of these scientists were devoted to problems of the theory of choice under risk and uncertainty, i.e. to emphasizing the factors through which individuals process and evaluate available information and it formed the basis of qualitative and quantitative judgments that determine their choice of one of the many available alternatives. It is difficult to single out the most important achievements, but we must mention so-called concept of "bounded rationality" by Simon and its associated psychological category of

"difficulty level" by Levin. Kahneman and Tversky in their classic work "The theory of perspective: analysis of decision under risk" (most cited in this area and the second in the number of citations in economics science) and the later work in 1992 entitled "Advances in theory of perspective: a generalized representation of uncertainty" have generalized the results of years of research and presented an interpretation of the theory in the axiomatic way [11]. In this way the factors that characterize a universal and essential human nature have permanently found their place in the theoretical analysis [10].

Using the mathematical apparatus of game theory in economic theory proved to be very fruitful, especially in the strategic reciprocal action of economic agents. It has contributed to the explanation of their real behavior and to prediction of consequences of certain conflict behavior. Classical game theory did not have the ability of greater use and was therefore replaced by behavioristic theory of games. One of the greatest achievements of the representatives of TEP in this area is the theory of social preferences (Theory of Social Preferences) and equitable distribution, (see more in [10]).

The claim that people are motivated in their actions by money and the possibility of acquiring profit, says Scott [12] allowed the interest, the identification and construction of formal and often predictable models of human behavior. Researchers in the field of sociology and political science have tried to carve out an original theory based on the idea that all kinds of human actions are essentially of rational character and that people before making decisions estimate the gain and loss in all their actions. This theoretical approach was developed as a theory of rational choice. Sociologists discussed rational actions in parallel with other forms of action, in which there are rational and irrational elements. That approach, says Scott [12], recognizes traditional and accustomed activities, emotional or affective action and various forms of value (ideologically) oriented activities, which actively communicate with the pure forms of rational action.

Representatives of rational choice theory have attempted to explain economic phenomena by formalized mathematical modeling in various areas:

- in the theory of voting and coalition formations in political science (Downs, Buchanan, Tullock, and Riker),
- relations between ethnic minorities (Hechter),
- Social mobility and class reproduction (Goldthorpe, Breen, Rottman),
- crime and marriage (Becker),
- crime and marriage (Elster, Roemer and Wright).

All of them in genuine and specific ways present that individuals are aware of their actions (awards – social approval and money on the one hand and punishment on the other hand, that the so called Homans's "Created conditions") and motivated by the satisfaction of their needs and goals, through which

they express their subjective desires, and that their actions are determined by the available information about the conditions in which they operate. Since the resources are limited, they must make choices between alternative objectives in accordance with their preferences, priorities and available resources, but also between alternative forms of action, through the calculation that is most beneficial for them and that gives them the greatest satisfaction (Heath, Carling and Kahneman).

The idea of "rational action" implies that the social subject is always aware of his work and performs with deliberate and calculated strategy. Many authors agree that human behavior is conditioned and shaped by rewards and punishments which people face. People are doing some actions that lead them to the reward and avoid those actions that cause punishment. These are technically called the "created conditions" that determine human behavior. People learn from their past experiences. In addition, in social mutual activity they are interconnected by mutual general support (approval) or general opposing (disapproval). The approval is part of the process of social exchange, according to behavioral psychologists.

In the interpretations and explanations of key elements of rational choice theory Scott [12] stated the following questions: "Why would individuals ever feel any obligation or desire to act in a selfless manner? Why should individuals respect the rules that lead them to acting in the selfless manner?". The answer is simple: because of the obligation (standard behavior) to do so, because of moral and / or ideological commitment to the organization or because of the existence of reciprocity and cooperation (instinctive responses). This leads to the conclusion that the "rational choice and normative commitment are complementary processes in the formation of social action".

The methodological component of rational choice theory is reflected in the acceptance of methodological individualism, according to which all social phenomena come down to individual action. "Explanation of sociological facts in terms of other sociological fact is the best shorthand overview of much detailed processes that produce them and which are responsible for their individual stratification," says Scott [12], noting that Homans held that "there are no autonomous social structures ", because " there is nothing in society that was not left by people." Homans argued that his analysis of the elemental social behavior in human inter-activity involves sub-institutional level of social analysis and that all highly – ranked social institutes depend on all these interactions. The higher the institutional level the more complicated the behavior, because there is a greater number of intermediaries. Research and analysis of social network have enabled reaching the conclusion that the social structures can be understood as interconnecting chains, which form a broad network of exchanges through which the resources flow.

Attempts to explain specific structural features of social life have resulted in understanding of so-called "unintended consequences" of individual action. The combination of unintended consequences produces social phenomena of which the individuals may be only partially aware and perceive them as restrictions. Classic example is the interpretation of the effects of market relations in neoclassical economic theory. The operation of competitive market leads to harmonization of supply and demand, and therefore (supposedly) there is no need for centralized planning and coordination (i.e. government regulation as the Institute of Economics). Equating supply and demand is the unplanned consequence of the enormous number of individual actions. In this way, rational choice theorists tend to deny any autonomy or restrictive power of social structures (and therefore social institutes). This dilemma (not to say error) is not discussed by the theory of rational choice and methodological individualism as its platform, because most of its representatives perceive the given problem as philosophically unchangeable. In terms of neo-institutional pluralism, it is quite clear that this is a monistic interpretation, which focuses on individual action and leaves out the analysis of social structure, social norms (altruism, reciprocity, trust, etc.) and collective action. These are serious limitations of the discussed rational choice theory.

The famous social psychologists Kahneman and Tversky [13], through their research work (the Nobel Prize in Economics in 2002) have significantly influenced the development of behavioral economics as a science that uses knowledge about the social, cognitive and emotional phenomena that influence the economic behavior of people. They have successfully introduced psychology in the area of economic science and proven its indispensability in explaining and predicting economic behavior of people. In this way, they have significantly reduced the disparity between economic theory and actual behavior, which was reflected in a lack of predictiveness. They have increased the validity of economic modeling, which until then was based on mathematical axioms and formalization of decision-making. Of course, people are, however, only people who make mistakes when making their decisions and estimating available (incomplete and asymmetric) information, emotions, past experiences, attitudes, beliefs, situational context in the form of which the problem is set. In addition, people with limited mental capacity process many essential information for decision making. So they rely on mental shortcuts (heuristics) that they believe will effectively lead to quality decisions, but they are not aware that this may lead to undesirable consequences as well. Cognitive abnormalities that affect a wide range of economic behavior of people (consumption, saving, investing, borrowing, etc.) are numerous.

Summarizing the common characteristics of the winners of six Nobel Prizes in Economics (Sen,

McFadden, Akerlof, Stiglitz, Kahneman and Smith) researchers highlight [3; 7; 8] the following:

First, four of them believe that the interpretation of classical and neoclassical theories that rational individuals are at the heart of business processes is denied.

Second, they all deny that individual decisions can lead to an efficient equilibrium that "purifies the market".

Third, various models of universal human psyche, to which all the winners tend to in one way or another, essentially differ from each other, so that, objectively, they do not provide a unique and universal alternative to neoclassical theory, which they criticize.

Fourth, they do not even question the types of the human psyche, they even don't mention any details contained in the works of Keynes, Marshall, Weblen, Pareto and others.

The behavior of economic agents is defined, [10] by not only genetic (congenital) basis of their psyche, neo and social norms that they adopted, the rules, values, habits, etc., i. e. institutions as coordinators, limiters and regulators of human behavior. Their desires and goals are primarily motivated by preserving the status quo and avoiding risks and uncertainties. Decisions in a market system by economic entities are made intuitively, starting from the psycho-social heterogeneous criteria, due to which they cannot be in equilibrium and they rather tend to an optimum, due to the impact of asymmetric information, uncertainty, involuntary unemployment, inefficiency, etc. The accumulation of tension is prevented by evolutive and flexible development of institutional system, in which the state support of the market plays an important role. This undermines both the neoclassical and neo-institutional way of thinking of Coase and Williamson and leans to post-Keynesian and evolutionary theory of economic development. Independently, principled lack of rational choice theory consists of the fact that the latest achievements of the new field of human genetics – psycho-genomics are not being used [10].

Relatively stable basis of the psyche exists in real terms, as evidenced by the achievements of geneticists, who have deciphered the molecular structure of the human genome and determined the specific functions of many genes, even those who manage various aspects of human psyche. In this sense, a special area of genetics – psycho-genomics is being developed. It is believed that genes affect only 50 % of the psyche and behavior, while a society, environment, education, skills, education, habit (unconscious and routine), etc. play an equivalent or even greater role [9]. So psycho-genomics does not negate the possibility of forming of certain schemes of opinions in human brains, but in fact a leading role is played by intuition and imitation, which means sub-cognitive, not cognitive-logical analysis. Wrong neo-classical axiom of "economic man" is not socially, politically and ideologically neutral, but is a direct logical path to the "economic imperialism" and neoliberal "market funda-

mentalism," says Olsevich [14]. As a consequence of these doctrines he gives predatory corruptive-oligarchic elite and proposes a salvatory alternative – the constitutional ideology of democratic and socially responsible market (which includes institutional pluralism).

Modern economic science in matters of universality of research directions and methodological approaches is no different from the past. Although many contemporary theoretical concepts do not negate the individual parts of the neoclassical paradigm (e.g. economic behaviorism does not negate the utility maximization, general economic equilibrium, economic efficiency and methodological individualism), decades of dominating (axiomatically) neoclassical mainstream are not nearly as consistent as it was. Despite the apparent contributions in the field of the positive approach to studying the process of individual decision – making in situations of risk and uncertainty, a limiting paradigmatic factor of the theory of rational behavior as an alternative direction (upstream) presents a monistic approach, i.e. ignoring the social pluralism.

The theory of rational behavior has a logical analytical structure, which has proved its fruitfulness in the study of some economic phenomena. Most authors, however, waive its paradigmatic significance, because many of its elements and segments do not yet have a proven practical application, which does not mean that this will not happen in the near or distant future. However, it seems that it has contributed to the methodological individualism to rise to a higher level, combined (amended) with "methodological behaviorism", i.e. cognitive and psychological approaches to economic behavior. It remains to be seen whether the evolution of this promising economic direction will take into account the so called "methodological institutionalism" (a term by Frolov [15], who in pursuit of originality reduces it only to the subject of scientific research), under which in a broader sense the institutional and conventionalist (regardless of its typological amorphous nature) pluralism may be included, denying all forms of monism. Practical application of this pluralism is different from country to country, but there is not absolute anywhere. Approaching the absolute institutional pluralism includes and requires completeness of institutional conditions and democratic procedures in the society. It is evident that the theory of rational behavior distanced itself from the institutional structures, in which the behavior of economic agents is realized.

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Стаття надійшла до ред.
07.05.2012 р.