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CONVERGENCE OF BEHAVIORAL ECONOMICS AND ORTHODOX ECONOMIC THEORY

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Abstract

In recent decades, more and more attention is paid to the research of influence of social and cognitive factors on economic decision-making, both on the individual level and on organizational one. The new challenge of modern era is an integration of the key areas of factual and psychological data analysis and their impact on small and large-scale economic phenomena, which results in emergence of a new scientific discipline called "behavioral economics". The main purpose of the research is how to distinguish the orthodox view in economic theory and the newly-born branch - behavioral economy. In the recent paper we state the features of the behavioral economics in contrast to the orthodox economic theory, define the origins of the paradigm, analyze the specifics of the research methods used by the new scientific direction. Also, the specific of terminology of the theory and the role of an economic agent in these two areas of economic theory are determined. And finally, main challenges of behavioral science are revealed and ways of how it can enrich economic theory are shown. Main conclusion says that there is a significant improvement in the predictive capabilities of the theory due to new direction of economic science on the one hand, and on the other hand, economic theory can expand on a field of phenomena that were not previously involved in the consideration by economists.

Keywords: Behavioral economics, rational and irrational choice, economic agent, orthodox economic theory.

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1. Introduction

Observing the behavior of a person, one can see that his actions can be rational or irrational. A modern neoclassical mainstream economy studies rational behavior. Within the neoclassical model, rational agents know all alternatives and all their parameters. A rational person clearly knows his preferences, which are consistent and stable. He chooses the best option from all available, maximizing his utility, and can also rank all alternatives in a consistent way.

The behavior of a real person is different from a rational agent, and the fist is not always so impeccable as the second one, moreover, a real person systematically makes mistakes and makes irrational decisions, yielding to an outburst of feelings or just randomly.

As we can see, real life is much more complicated than a simple mathematical model underlying the orthodox theoretical scheme of "economic man", which got no right for emotions, feelings, and mistakes. It turns out that the "economic man", the central concept of orthodox economic theory, does not exist in reality, but it is very convenient for formalization in the theory. Moreover, there is a temptation to attribute very complicated methods of decision making to the real human choice in everyday practice (Antonova et al., 2016).

In this case, there arises an expected question: how significant are the psychological factors that bias human decision-making and how much can they outweigh such material benefits as money which economists are accustomed to consider as the main stimulus of human activity?

Such deviations should be investigated in order to include them to economic models. This was the preliminary goal of such a scientific field as behavioral economics. The emergence of this area of scientific research is associated with findings at the frontiers of intersection of psychological and economic research. Ideas and approaches that were developed within the behavioral economics quickly received academic recognition and led to the restructuring of many sections of economic theory.

2. Problem Statement

Here we consider the origins of behavioral economics.

The main objective of behavioral economic theory is the study of the influence of various mental states of individuals when making economic decisions. Behavioral economics originates in 1950-1960 in the papers of such scientists as G. Simon and G. Katona. Some researchers find the origins of behavioral concepts in the works of the father of economic theory - Adam Smith (Thaler, 2016).

In the modern history of the behavioral economics, Simon was the first who spoke of the unreasonableness of the psychological premises of the complete information that was used in neoclassical theory. According to his theory, an economic agent simply does not have enough computing power to increase utility or profit. The problem of an economic agent, which was proposed by Simon, is not even that he has little information, but that there is too much information with regard to the possibilities of processing it. The whole range of limitations that relate to the knowledge and ability of people to calculate, not allowing them to behave in reality as neoclassical theory predicts, Simon gave the definition of "limited rationality".

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Katona, in turn, developed two important aspects of decision making: “genuine decision” and “habitual behavior”, thereby dividing the scope of application of neoclassical models with high requirements for rationality, and of evolutionary decision-making models, where economic behavior appears in the form of habits and customs (Katona, 1951). It is the motives, attitudes, expectations, and other psychological variables, that should be taken into account as “intermediaries” between the objective conditions which influence economic agents and the final decisions they take under these conditions.

The beginning of the modern behavioral approach in economic theory is associated with such researchers as Tversky and Kahneman with the series of their papers in the 1970s (Kahneman, & Tversky 1979; Tversky, & Kahneman, 1974, 1981). The researchers found, summarizing most of the human strangeness and failures, that in the process of making economic decisions, people are not just mistaken, but mistaken regularly and uniformly, which makes it possible to systematize and predict human errors.

Remarkable thing here is the ratio and subordination of various scientific disciplines, at the intersection of which the behavioral economy takes its origins. Unlike ”economic imperialism” in the representation of Becker, Hirschleifer (Hirshleifer, 1985; 2001), and other, where the penetration of the economic approach into the subject field of other sciences is observed, in the behavioral economics, the basic constructs are borrowed from psychology, but to the extent that they allow to improve understanding of psychological factors in a situation or to find gaps in the economic analysis of practice where economic science is useless. Thus, in this concept, psychological features of human perception, judgments and actions in modeling human behavior are taken into account. Such a full consideration of the characteristics of human behavior serves the purpose of improving the predictive capabilities of economic theory by rethinking its assumptions and revealing their connection with what scientists know about the socially conditioned and psychological characteristics of human perception, judgment and behavior.

Still, it is too early to disregard neoclassical economics as unnecessary in practical terms. Behavioral economics suffers from the same shortcomings as psychological concepts. Now it is a collection of disparate phenomena, the emergence of which in economic reality does not have well-shaped assumptions, and hence the predictive power of the behavioral economics postulates is not very great. Still psychology is heavily used in marketing (Kiseleva et al., 2016).

Despite the clear results of numerous experiments proving the irrationality of human behavior (or a behavioral roots of human being) or disproving the postulates of the normative economic theory, the behavioral economy has its opponents. For example, the founder of the experimental economy, Vernon Smith, who received the Nobel Prize in the same year as Kahneman, believed for many years that experiments in the field of economics confirm, rather than disprove, the principles of rational behavior. The fact that both the defender and the opponent of rational behavior divided the Nobel prize in 2002 contributes more to that there is yet no correct and clear understanding of the subordination between normative and behavioural economics.

3. Research Questions

- What are the features of the behavioral economics in contrast to the orthodox economic theory?
- What methods are most actively used by behavioral economics?

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- What is the specific of terminology of the theory?
- What is the difference between the role of an economic agent in these two areas of economic theory?
- What are the main challenges of behavioral science and how can it enrich economic theory?

4. Purpose of the Study

The main purpose of the research is how to distinguish the orthodox view in economic theory and the newly-born branch - behavioral economy. Accordingly, in the article below, we will attempt to draw a demarcation line between these two concepts, to highlight the features of the behavioral economy in its subject and method, and also to try to determine the direction of convergence of these two areas of economic science.

5. Research Methods

In the presented research, methods of scientific abstraction, highlighting of main features, generalization and classification were used.

6. Findings

The first finding - Features of the behavioral economy as a science.

In the title of direction there is the adjective "behavioral", which indirectly refers to the classical behaviorism (Watson, 1914), but upon closer inspection it is not so (Angner & Loewenstein, 2007). Behaviorism considered the subject of psychology to be only observable behavior that can be measured objectively. Behavioral economics deals with directly non-observed mental phenomena, such as representations, desires, intentions or plans, and studies the influence of different mental states of individual decision making, which is not the subject of classical behaviorism, but the focus of its opponent - cognitive psychology. Thus, the word “behavioral” does not accurately reflect the content of the new direction, it would be better to call it “cognitive economics” (Lambert, 2006).

Behavioral economy is closely infused with the experimental economics (Kapeljushnikov, 2013). Both behavioral and experimental economics deal with the study of individual decisions, but in the first case it is a question of a set of initial hypotheses and phenomena, in the second case, a research tool (laboratory or field experiment) as an well-defined research paradigm that already has its traditions.

Behavioral economics relies primarily on empirical material, preferring deduction as the main method of recognition. Therefore, its arsenal of methods for obtaining data for analysis includes such tools as

- neuroeconomics - studying the reaction of the human brain to environmental changes in situations connected with economic choice;
- biology of primates and other animals - the study of animal behavior, for which the economic conditions of choice are simulated which are similar to real human systems, that allows us to understand the correlation of biological and individual social components in the choice of people;

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- conducting laboratory experiments in which participants are invited to participate in a specially simulated game (involving the computer or without it), the conditions of which correspond to the actual circumstances of the decision-making of economic entities.

Behavioral economics also deals with a whole range of theories in which the process of decision-making in various areas of the economy is described. This is primarily a microeconomic level - firms, organizations or their units, households, as well as the nanoeconomic level - a separate entity.

The basic categories of the behavioral economics are:

- Heuristics - emotionally reinforced template mechanism for simplified decision-making in a situation of uncertainty.
- Routine as a stable sequence of actions taken by the individual in choice situations perceived as similar, on the basis of which a positive effect of the scale of cognitive abilities and the time of decision making arises (Ryzhkova, Dibrov, Shchukina, 2016).
- Frame is a semantic interpretation of the choice situation in order to understand it and choose the variant of actions.
- Cognitive biases - systematic errors in making economic decisions, due to the peculiarities of human perception and information processing.

To understand how the real decision-making process is carried out, what factors and conditions (other than economic) determine it, what are the regularities inherent in these decision-making processes - this is the goal of the research that the behavioral economy sets itself.

In real life, there is always a place for emotions, feelings, even mistakes, and this is common to all economic entities. Often people understand and comment on situations in which they fall, not as prescribed by the stereotyped form of rational choice. For example, people

- made decisions under the influence of information that does not matter;
- tend to behave impulsively under the influence of rapidly changing emotional states;
- do not comply with the deadlines for the implementation of planned decisions;
- value objects that are owned by theirselves above exactly the same owned by others;
- act by inertia, without any effort on decision making process.

Cognitive biases are documented and described by researchers in behavioraleconomics, their list is large enough and continuously updated.

A clear difference in the definition of an economic agent in orthodox and behavioral economic theory can be shown in Table 1.

Table 01. Economic agent in the orthodox and behavioural economics

Rational Agent (orthodox economics)	**«Behavioral» Agent (behavioral economics)**
Knows all alternatives and all their parameters.	- There are too many alternatives to be elaborated. - Many parameters are hidden from the individual.
- Can compare and rank all alternatives in a consistent manner. - Knows clearly his preferences. - Has stable preferences.	- It is difficult for the agent to evaluate and compare alternatives. - Agent does not always know what he wants. - Preferences are not stable.
Chooses the best ("optimal") option, maximizing utility.	- Optimum is not always available. - Optimum does not always exist.

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	- The choice can be emotional. - A non-rational choice, taking into account all the costs, may prove to be more beneficial than the optimal one.

As shown in the table, the "behavioral" agent is much more adapted to real circumstances than the rational agent. Moreover, the use of the body's resources by a rational agent is excessive, which does not allow speaking about its high adaptability and the potential for survival.

In this case, the expected question arises: If the non-economic factors (psychological or sociocultural) can directly influence the decision-making process and even outweigh such material benefits as money, are they so important that can even shift money as the main stimulus of the economic subject, to which classical and neoclassical economics of the economics so get used to? To answer this question, to develop recommendations for overcoming behavioral errors, and to expand the boundaries of ideas about the behavior of the traditional rational subject was the main challenge of a new field of science - behavioral economics – which was designed to combine the psychological and economic views on human behaviour.

The second finding - Differences between orthodox and behavioral economic theory

According to assumptions of orthodox economics, people are quite sensible and rational, at least in those situations in which they act as participants in market relations. This means that they can or they always have the opportunity to elaborate important information, and therefore they are able to pre-calculate and evaluate the forthcoming result, so that they acquire the ability to make informed decisions. The orthodox economics also recognizes the possibility that such solutions may turn out to be wrong.

It also allows the ability to effectively learn from one's own mistakes, which is assumed when using adaptive expectations, without taking into account one thing: in reality, the situation changes in such a way that "it is impossible to enter the same water twice", nevertheless, we must learn to swim.

In this case, the proponents of the behavioral economics offer to study not the ideal technique, but to be satisfied with those samples or collections of samples that are revealed in practice. Because irrationality is irreversibly included into human thinking and behavior; it is systematic and predictable.

There is an opinion that the orthodox economics perceives a human with much more optimism, allows to evaluate a person as a more perfect being, although this optimism has nothing to do to real life. Recognition of the ineradicableness of human irrationality opens the way for realization the nudge in the financial or social policy that the government can correct this irrationality and weaken undesirable consequences for society and for a person. "Rational Agent" is perfect. "Behavioral Agent" is not perfect enough to be incapable of transformation.

Behavioral economic theory enhances the explanatory power of orthodox economics by expanding the use of psychological justification and verification by observation and experience. It should be noted that this does not mean abandoning the neoclassical approach, namely, from the concept of maximizing utility, general economic equilibrium and efficiency. On the contrary, adherents of behavioral theory take one of the versions of the orthodox theory as the starting point and believe that the neoclassical approach has already proved fruitfulness in explaining the set of all conceivable types of economic behavior, as well as in the setting of refutable hypotheses. We believe that the time has come when neoclassicism, as a

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scientific paradigm, needs a qualitative modernization of the original research methodology. A good option for modernization is precisely behavioral economic theory.

7. Conclusion

Summing up, we can conclude that behavioral economic theory is a research paradigm that has already proved its effectiveness in the study of various economic phenomena. If we talk about the behavioral economics as an well-established system of positions and views, then this is not true not only for Russia, where this trend did not go beyond the two capitals, but also on a global scale: the behavioral economy still exists in the form of a collection of phenomena that contradict the orthodox economic theory. It is worth pointing out that there has recently been a trend towards incorporating the provisions of the behavioral economy into existing theories of the neoclassical type in the form of corrective processes for the rational choice of variable models. In this case, before the behavioral economy as a branch of economic theory, there is a threat of absorption and enveloping it by the prerequisites of neoclassicists. It is thus possible to subdue the rebel and return him to the “mother's womb” of neoclassic theory.

Regardless of the fate of the behavioral economics, its adherents have already made an undeniable contribution to the conceptual outlook of economic theories of individual choice and turned their eyes to the empirical research of economists, which practically was not practiced at the micro level before them. Due to this, the limitations which are inherent in the mainstream are gradually eliminated. Consequently, there is a significant improvement in the predictive capabilities of the theory on the one hand, and on the other hand, its extension to a field of phenomena that were not previously involved in the consideration.

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