

Review paper

BEHAVIORAL ANALYSIS OF ECONOMIC CHOICE: CONTRIBUTION TO IMPROVING ECONOMIC RATIONALITY

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Abstract. *If we start from the presumption that the aim of the theoretical analysis of the complex socio-economic reality is to provide certain knowledge by applying of which there can be improvement and betterment of that reality, then economical and theoretical mainstream usually does this starting from axiom of the rationality. On the other hand, if we keep in mind the current empirical data on the numerous problems and inefficient functioning of the economic actors, then the logical question that occurs is whether the presumption of the unlimited rationality of the economic subjects should be so easily idealised. Starting from the fact that the behavioral economics has a special role in the powerful critical attack on the “strong core” of the neo-classical mainstream, this paper discusses numerous psychological limitations of the process of economic decision-making, and the possibilities of their overcoming. In relation to this, we especially emphasize the importance of the behavioral analysis and its instrumentalist support directed toward the improvement of economic rationality and the quality of human decisions.*

Key Words: *rational choice, behavioral economics, behavioral anomalies and biases, ‘new’ paternalism*

INTRODUCTION

It is widespread opinion that the economic science is on a high level in the world of the social sciences. The economic science primarily owns such a reputation to the presumption of the rational behaviour. As a matter of fact, the promoters of the economic ideas have been usually starting from the basic principles of deductive logic when constructing the formal models of the human behaviour. These principles state that the economic research is based on certain presumptions or axioms that don't need to be proved.

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The typical axiom from which the neoclassical mainstream theory starts is the rational behaviour of the economic subjects in the basis of which is the presumption that the complex social phenomena can be explained within the boundaries of the elemental social impact from which they are constructed. This point of view, known as the methodological individualism, demands from the theoreticians of the rational choice to start their research with the individual impacts, and to analyse the other social phenomena as secondary or as derived from the individual impacts. This means that the starting point are the universal theoretic frames concerned with the individual that behaves rationally no matter in which of the economic activities he takes part (consumer, house hold, enterpriser). After that the theories of consumption, production, prices etc, can be created, with no help of the methodological transmission mechanisms. At the same time the accent is on the concept of the maximising rationality that starts from achieving the high satisfaction of the economic agents and in which the firms are reduced on the manufacturing functions, consumers on the utility functions, the institutions are given, and the process of optimisation is omnipresent.

The model of research that starts from the concept of the maximising rationality is close to the economists, or better to say their favourite. However, numerous empirical data about the problems and the inefficient functioning of the economic actors seem to more and more raise the question of whether and how should be persistent in defending the 'boundaries' of the maximising reality. This dilemma is not a simple one and it can be proved by the fact that any kind of accepting the existence of the bounded rationality would mean that there are also forms of irrational behaviour on the market. On the other hand, one should not ignore the fact that the conception of the full and maximising rationality shows considerable weaknesses related to the real functioning of the economy, or related to the explanation in which way the real human mind brings economic decisions and how it adjusts itself to the circumstances of the real world.

The above stated theoretical methodological problems and doubts related to the phenomenology of the human rationality and maximisation, have caused the appearance and development of the concept of the bounded rationality. As the first ones who opposed the concept of the maximising, the representatives of behavioral economic theory should be mentioned.

The behavioral economic theory has been created as a symbiosis of the economic science and psychology. Its key premise is concerned with giving up the widely accepted model of the rational choice – the fundament on which the traditional economic analysis is based. Many experiments, conducted by the behavioral economists have shown that the realistic behavior of people does not have much in common with the main protagonist of the neoclassical theory – hyper-rational homo economicus- who has unlimited calculating capabilities and perfect information.

Having in mind the strengthening of the reputation and the position of the behavioral economics in various areas, the aim of this paper is to make the realistic insight of its importance from the standpoint of improving the understanding of the economic behavior. This aim will be achieved through examining the hypothesis about the fact that the behavioral analysis of economic choice, on the basis of identifying numerous failures related to the psychological dysfunctions, provides powerful instrumentalist support for designing government measures directed toward improvement quality of human decisions.

1. THE STANDARD MODEL OF THE RATIONAL CHOICE

The standard approach, accepted in the economic theory, presupposes a full rationality of the economic actors. From the standpoint of the methodology and the conception of the scientific progress, the rational choice definitely represents a hard core of the scientific research program of the neoclassical micro economy (Lakatos, 1970, p. 191). When the economists talk about the full rationality, they have in mind a couple of things. First of all it is assumed that the individuals are capable to hierarchically order their preferences and needs (Robins, 1945[1932], pp. 78-79), and therefore to undertake actions in the direction of their full satisfying. Next, it is assumed that they have a capability of precise calculating of the expenses and utility connected to different variants of choice. That means that when they face a couple of options, individuals usually choose the one that gives best results (Elster, 1989, p. 22). Finally, in the conditions of uncertainty, the individuals rely on the calculating of the possibility of happening of certain events and possible outcomes, using all the available information for this purpose, also those that can help them to successfully correct their starting judgments and calculations (Camerer, et al., 2003, pp. 1214 -1215).

The understanding of rationality, as presented in the modern economic theory, has the epithet of formal. As a matter of fact, on the basis of the formalistic method that presupposes the existence of the formal system of the logical ties (Wilber, Harrison, 1978, p.62), the notion of rationality doesn't speak about whether the aims to which the individuals strive are justified or not, or whether there is any contradiction or opposition of the individual preferences. The dominant purpose of understanding the rationality is making a presumption about the existence of choice, which implies that with any given structure of preferences and group of limitations (physical, institutionalized, informational) the individuals choose for themselves the best variant from the group of available variants of resource usage. This means that from the rational individuals we expect they would make identical choice in the identical situations, without later reconsidering or regret for the alternative they didn't choose.

In addition to the presumption that the rational individual has personal preferences and that they are the basis of his choice, the notion of the rational individual has mild presumptions of the logical consistency expressed in the following axioms:

- The condition of completeness (independently from the degree of difference or similarity of the alternatives, the person that reaches a decision is capable to compare and order them hierarchically),
- The condition of transitivity (if a rational individual prefers the alternative option A in relation to the alternative option B, as well as the alternative option C, then he prefers A in relation to C),
- The independency of the context (the choice between two options does not depend from the order in which they appear, or whether a third alternative is available).

The last axiom refers to the fact that the individuals act and behave in the same way independently from whether they do it separately or together in a system. This axiom can be connected in the theoretical methodological literature with the individualist component of the theory of rational choice and the method of isolation related to this theory. As a matter of fact, the supporters and those who criticize the theory of the rational choice point out that it is psychological and individualistic. It is psychological because it explains the acts of the participants starting from their mental conditions. This theory is simultaneously individualistic because it is applied on the behavior of the individual participants and on

the individual activities. The social groups are observed solely as aggregates made of individuals, which means that their behavior is explained starting from the mental condition of the individuals and their interactions. Therefore, in the basis of this view of the structure of the economic and any other system is the presumption of the possibility to 'isolate' the individuals and to analyse them separately and out of the context of which they are a consistent part (Zwirn, 2007, p.54).

Philosophically speaking, the presumption of the rationality of behavior is equivalent to the presumption about the unity of the economic actors - about the existence of a unified 'I' in each one of them. The argumentation of the representatives of the neoclassical economic theory is in favor of the unified function of utility, it originates according to their opinion from the logical presumption that when we speak about the homo oeconomicus we can not think about a split personality. In addition to the logical explanations, it is interesting that we also have some picturesque explanations related to this, like those that 'in each man there is only one nose or one stomach' (Saint-Paul, 2011, p. 20).

For the neoclassical theory the principle of rationality has not only the analytical but also a normative meaning, which is expressed not only during describing or explaining of the observed phenomena but also during evaluating the alternative options by the terms good/bad. The statement that the individuals always behave rationally is in an unbreakable tie with the presumption that they excellently know what is in their best interest, and that there is no one who knows it better than them. That is why this presumption is simultaneously normative and positive: the individuals should always act for their best interest (Golubović, 2011, p. 156). In this way we actualize the question of how we should decide, which has among other things, influenced during the half of the twentieth century the appearance of the normative theory of decision making. Contrary to the descriptive theory whose aim is describing of the things as they are, the normative theory of decision making deals with the concept of rationality and the logic of making decisions, in the way they should be (Milicević, et al., 2007, p. 147)

2. THE BEHAVIORAL ECONOMICS ABOUT THE STANDARD MODELS OF RATIONAL CHOICE

The theory of the rational choice has proved to be very useful, and it is even empirically proved in many situations such as those of the competition markets (Ostrom, 1998). The fact is, however, that their conclusions often don't find confirmation in the empirical research. On this, among others, particularly insisted representatives of the new analytical approach that introduced and strengthened the name behavioral economics. Its constituting as an independent subdiscipline within the economic science was significantly affected by the „old“ behavioral economics related to H. Simon (1955, 1957) and J. Katona (1951), that emerged in the 1950s and 1960s. Then, in the 1970s, by publishment of the two articles of the well-known psychologists D. Kahneman and A. Tversky (1974), affirmation new behavioral economics occurred. In these articles they criticized the orthodox theory of expected utility, proposing the alternative conception of reaching decisions in the conditions of uncertainty, known under the name 'prospect theory'. The same importance was given to Thaler (1980) from the standpoint of popularization of the ideas of behaviorism. In his famous article he listed many empirical evidences about the suboptimality of the economic decisions. Following their example a large number of economists and psychologists entered the process of the 'dismantlement' of the model of rational choice, bringing up more and

more denying facts. Among the active representatives of the behavioral economy, among others, we can mention G. Akerlof, D. Ariely, C. Camerer, G. Loewenstein, D. Laibson, M. Rabin, C. Sunstein etc.

The representatives of the behavioral economics strive to offer numerous empirical proofs about the fact that the real behavior of people is not depicting the key segments and demands of the formal models. "We argue that the deviations of actual behavior from the normative model are too widespread to be ignored, too systematic to be dismissed as random error, and too fundamental to be accommodated by relaxing the normative system" (Tversky, Kahneman, 1986, p. 252). That is the key reason why "behavioral economics deals with the factors that influence the decisions of market participants, based on bounded - not perfect - rationality. One is not to start from the assumed behavior but to explore the actual human behavior" (Stojanović, 2013, p. 569). This means that it places in the centre of analysis the fact that people have limited knowledge, information and cognitive capabilities, which is why they can not judge about the real events in the way that the standard model of the rational choice demands.

The behavioral economics insists that the real life abounds with the examples of irrational behavior, which strongly shakes the philosophical foundations of the conventional choice, especially the presumptions about the identification of the personal interests and the existence of the unified psychological center of decision making. As a matter of fact, the results of the empirical research show that in many cases people find it hard identify, comprehend and represent to the environment their true interests, so that it often happens that in accordance with the emotional inversion in relation to the real standard of the stimulants, they act contrary to them. That is why the question that is repeated is what gives us the right to presuppose that the individuals always know which of the possible variants of impact is the best for them, and whether this presumption pretends to occupy the role of the normative standard for determining the welfare independently from whether we talk about the individuals or the society as a whole (Капелюшников, 2013, p. 74).

In addition to the difficulties related to identifying and representing the individual interests, the aberrations from the rational behavior are the consequence of the functioning of the complex psychology of the individual. As a matter of fact, people are as a rule characterized by a multiple I, which is often obvious in the situations in which reaching of the individual decisions is based on fulfilling selfish interests, not taking into consideration the interests of the other individuals. When, however, each individual acts exclusively as a rational maximizing factor of utility, it is expected that the real behavior doesn't result in the results that were intended.

By giving up the idea of practical impossibility of applying the global, overall rationality, the question that is up-to-date is concerned with the way of understanding and interpreting the surrounding in the conditions of scarce knowledge and limited analytical capabilities. In relation to this we can start the analysis by presenting the two basic conceptions about obtaining and usage of the available data (Ходжсон, 2000, pp. 49-50). The first is the conception of the *direct cognition of the socio-economic reality*. It is a kind of a direct, immediate empiricism which supposes that in the process of cognition we can use the empirical facts freely. It is assumed that the subjects get the information from the surrounding, without the previous structuring of the notions, rules and theories. This means that the information are directly acquired, to be later transformed into the useful knowledge, getting a form of the undeniable facts and precisely defined probabilities of the occurrence of a certain event. The information is precise and sufficiently transparent, so that we can

expect the rational economic actors to react the same in case they have this information. If they ever had certain wrong understandings and beliefs, they will correct them in accordance with the newly gathered information and fresh experience. That is why it is believed that the wrong beliefs can not last too long, or that they can not be the lasting characteristic of the process of cognition, although there are facts that deny such an optimistic scenario (Frey, 1992, p. 244).

As opposed to this optimistic version of judging the existing phenomena and events there is a *conception of the real cognition of the world*. It questions the issue of the capability of the common, average observer to directly and unmistakably decide what to do on the economic plan. Additionally, the insufficient capacities in the right judgment are explained by the conceptual difference between the data and information gathered by the senses. As a matter of fact, the data include a multitude of the auditory, visual and other signals that reach the human brain. However, the knowledge about the real socio-economical occurrences is not formed in the moment of obtaining the stimuli of the senses but in the moment of their reaching the human brain and placing in the system of the abstract notions and conceptions. We should adequately value not only the immediate accumulation of the information but also the development of the cognitive capacities, or acquiring of the practical and intellectual habits in the realization of the cognitive process. This means that lots of information can go through the thick 'cognitive sieve' in order to be interpreted in the right way (Petrović, Stefanović, 2009, p. 34). That is why when the stimuli of the senses come on the basis of the acquired information they are not strongly contradictory to the existing scheme of the notional conceptions, the individuals can relatively easily realize the process of the cognition of the environment. However if the information is not in accordance with the existing categorical apparatus, the question of forming the perceptions is actualized and also their influence on the decision making. That is why in the case when the stimuli of the senses are not strongly contradicting with the existent scheme of the notional conceptions, the individuals can relatively easily realize the process of cognition of the environment. However if the information is not in accordance with the existing categorical apparatus, the question of forming the perceptions is actualized and also of their influence on the decision making. That is why in the case of the 'invasion' of insufficiently clarified information it is necessary to ignore them, or to change the existing conceptual structure in accordance with this information. But, whatever happens, it is obvious that the wrong beliefs can not be momentarily excluded and that their correction is along process of the theoretically-empirical coming face to face.

3. THE BASIC COGNITIVE AND BEHAVIORAL BIASES IN THE PROCESS OF DECISION MAKING

All the economic models that start from the presumptions that the information is available, clear and precise, and that the economic agents always react to the same information in the same way, can be brought into question. The reality abounds with the examples of the aberration from the non-conventional rational model, which is primarily related to the cognitive limitations and mistakes made on this basis. The economic subjects for example can make mistakes when they reach decisions without the influence of the available information, often having too much confidence and in relation to this not giving up the fulfillment of the planned decisions. That is when as a rule they act inertly, unrealistically judging the probability of occurrence of the future events. On the other hand, they can act impulsively

and under the influence of the rapidly changing emotional conditions. That is why it is not surprising when in certain situations rather competent, functionally literate and successful people can behave irrationally, which can harm their long-term interests.

The research in the field of the human decision making try to detect the system mistakes that people make. Among the numerous mistakes related to the psychological dysfunctions, this time we will talk only about those that are most often mentioned among the representatives of the behavioral economics.

1. The hyperbolic discounting. It is well-known that the individuals prefer the present goods and that therefore they are ready to sacrifice a large quantity of the future goods in order to spend the smaller quantity of them in the future. The proportions of this conversion however are the result of the subjective norms connected to the evaluating of the time in the sense of the benefits of enjoying the ongoing consumption. Since the subjectively shaped judgments can be rather different from one individual to the other, it can happen that during the decision making about the usage of resources individuals start from different rates of discounting. That is why for example patient people have a lower discount rate while the impatient ones have a high rate.

The decisions about the usage of the resources can be considered rational if the rate of discounting is unchanged and constant during time. The 'exchange' of these two periods of time is then exclusively influenced by their time distance and as such it doesn't depend from the time difference of these periods in relation to the actual moment of time. The algorithm of discounting defined in such a way is called the exponent, having in mind that to the extent of distancing in relation to the present moment the value of the future goods is lessened according to the exponent rate.

However, as explained by the behaviorists, many people and maybe the majority of them are in the real life inconsistent concerning discounting, practicing the exponential instead of the hyperbolic discounting (Rizzo, Whitman, 2009, p. 924) This means that the norms of discounting that they use are not consistent, and that they are become higher with the closeness of the period that is being compared with the present period. That is why an individual can judge that 100 dollars that he should get for two years are the equivalent to the amount of 90 dollars that he could get for a year, but simultaneously he can judge that 100 dollars can have the same value in a year as 80 dollars in the actual period of time. It turns out that the discounting factor in the first case is 0.90 and in the second 0.80, or that the individual can have two discounting factors: 0.90 in the two next years in the future and 0.80 between the current and next year (*ibid.*, p. 925).

Making decisions in the conditions of the hyperbolic discounting gets marks of the disharmonious process in time. For example, at one moment an individual t_0 can show his intention to put in the moment t_1 85 dollars on a savings account in a bank if the effective interest rate guarantees gaining 100 dollars in the moment t_2 , starting from the fact that if the discount rate is 0,9 this seems to be a right decision. However, when the moment t_1 happens, he can give up his previous intention and 85 dollars, planned for savings can be redirected to spending. Placing money in a bank when the discount rate is 0,8 can seem to him as a less payable solution in compared to the spending of the desired goods. It turns out that in the conditions of the hyperbolic discounting, an individual starts a real 'discord' between the potential alternative decisions, choosing first one and then the other alternative option. It is analogue to the everyday questioning of the decisions in life, which all the people on planet face. For example, a man can plan to start putting money

aside for saving since the New Year's Eve, or to stop smoking and start strict diet, but when that moment comes he gives up.

The above mentioned models of behavior are placed by the behavioral theory in the category of the irrational human acting. There are primarily related to the lack of self-control, reflecting that people are not ready to resist the temptations. The strong impatience is followed by the high short term rate of discount, when those decisions that we assume will bring certain benefit are made, and that the expenses that follow the process of decision making will come gradually over time. Such an approach can, unfortunately result in the negative occurrences such as delaying of reaching the important decisions, forming of the portfolio of the mutually exclusive financial instruments (when for example, individuals use credit cards with the high interest rates, while simultaneously they buy valuable papers with lower incomes), to high indebting, low savings etc (Капелюшников, 2013, p. 76)

2. *Psychological state.* The process of decision making is strongly influenced by the psychological state of the individuals ("hot" or "cold" state) which can result in the effects which to a large extent from what they would fulfill if they were governed by the elementar norms of the rational behavior. In some affective, biologically 'hot' and 'burning' states, individuals tend to make some hasty decisions, which will turn out to be wrong and very 'expensive' and that after they have been made the return to the old state is impossible (Camerer, et al., 2003, p. 1238). The individuals then usually start to overestimate the potential short term utility, ignoring the possible long term damage and high expenses of reaching such decisions. In that way, for example students in the state of disappointment, anger and fear can make a decision about finishing their studies, which in the long term can turn out to be a completely wrong move.

3. *The dependency from the context* can occur in two basic forms. The first is known as the '*framing effect*' (Rizzo, Whitman, 2009, p. 928), when the choice is made under the influence of the less important aspects characteristic for certain situations and events. It is related to the violation of the principle of 'independence from the insignificant alternatives' which is why, among other things the orientation in favor of A or B depends from the order of representing the options A and B. The influence of the psychological aspects on the process of acquiring and processing of information as well as on the hierarchical shaping and organization of the preferences can be characterized as a "disjunction effect: people prefer information X over information Y when they know that event A will not occur, but they prefer information Y over information X when they do not know whether event A will occur" (Garsia, 2013, p. 300).

We can illustrate the fact that the choice is very dependent from seemingly unimportant aspects of the situation, like the order of the presented options, by an example from the medical practice: when the patients are being informed that the proposed procedure of therapy has the rate of surviving of 90%, the majority will probably be ready to undergo it. However, if the order of the sentences is different and if we say first that the rate of dying during the proposed procedure is 10%, there is a high probability that the majority will show their intention to give up from it.

The dependency from the context can be observed through the possibility of evaluating the available alternatives on the basis of comparison with some referent values, sums or amounts. The referent point with which we compare can be a result of a personal experience, but also of some other factors that come from the surrounding. That is how a student can measure his success in the absolute sense, or in relation to the best possible

result that can be achieved by passing the exams. The above mentioned phenomenon however can be approached relatively, comparing one's own success with the success of colleagues. Similarly to this, the owner of a company can in one context be dissatisfied with the business of the firm, thinking that he didn't achieve the desired results. However, in the other context, on the basis of comparison with the business results of the firms from the surrounding, he can even be relatively satisfied with the achieved.

The effect of the dependence exists in the case when the answers to the questions are subconsciously adjusted to some of the previously arbitrary offered anchor. The anchoring is a set of influences that are applied in many psychological researches that are related to the beliefs about the uncertain quantities. In these experiments, the subject is asked to judge whether certain value (anchor) in these experiments is higher or lower than the uncertain quantity. The rough result is that the subjects start from the anchor and don't succeed to completely correct their judgment in accordance with their basic belief, so that their judgment is inclined toward the anchor. Even explicit uninformative hint, for example accidentally chosen number can function as an anchor. Usual explanation for the occurrence of anchoring is that the value of the anchor offers, at least temporarily a possibility for the quantity that is estimated to be around that value. For example, houses and cars are sold by bargain that begins from the initial price. It would be surprising if the initial price wouldn't have any influence on the perceptions (MekFaden, 2003, pp. 184-185).

4. *The mistakes related to the optimism and pessimism* (Rizzo, Whitman, 2009, p. 940). Depending whether people are too confident or characterized by a lack of self-confidence, there are mistakes that are in behavioral economics brought into connection with optimism and pessimism. The mistakes caused by optimistic thinking happen as a consequence of ignoring certain probability of happening of the unwanted incidents, which can cause serious damage that can often not be repaired. That is why, for example an optimist can take a great risk, investing means into valuable papers with a high rate of interest. However, the secondary market of capital is because of its dynamics and mobility a typical area with a high level of uncertainty, and an individual has to be aware of this when reaching decision about buying shares of stocks of certain companies. On the other hand, the mistakes on the basis of pessimism are characteristic for people who are not sure of themselves, and who are therefore inclined toward exaggerating the probability of certain incidents occurrence. The consequence of this is that to strong cautiousness which as a rule results in avoiding any risk when it comes to investing.

5. *The effect of availability (availability bias)* (*ibid.*, p. 940). This effect is about the mistakes that happen when the individuals give too much importance to the easily available and key information, and too little to the initial probabilities, neglecting the fact that the causes are different. It is widely accepted that the first (the primary effect) or the last experiences (the recession effect) of the experience is, chronologically speaking, more easily called into memory than those that happened between them (MekFaden, 2003, pp.186-187). For example, if recently there was a fire or it was written about in the newspaper during previous days, then people will think that the occurrence of fire is rather probable and that it happens often, which perhaps is not corresponding to the reality. When in family violence happens in Serbia or a cruel murder, the public is disturbed and there are conclusions that during the last months the violence in family has been intensified, and that the number of murder is enlarged. That, however, does not have to have basis in the statistical data, so more complete research could maybe result in the

cruel fact that it was always happening, and that it only depicts the complexity of the human relations (Kitanović, Petrović, 2010, p. 111).

The natural inclination of people toward overestimating the probability of occurrence of certain events on the basis of their witnessing such events in the close future, has its 'economic weight'. As a matter of fact, under the effect of the availability the individuals can give up even those projects that have rather moderate, reasonable degrees of risk, damaging in this way their welfare and life standard. For example, if there was recently a liquidation of a famous company, or a strike in a large company, many people will think that the bankruptcy and strikes have lately become often. Because of this, among other things, some workers of some companies can give up the intention to make legitimate demands for the salary increase, which can keep the employer in belief that they are satisfied with the salary that they are being paid.

6. *The mistakes related to presentation of the status quo (status quo bias)* (Rizzo, Whitman, p. 935). It is related to the human tendency to be reserved toward anything new, even when it can bring a lot of benefit to them or when the expenses are related to 'breaking up' with the old are relatively low. One of the reasons for such cautious evaluating of any changes is that people are rather emotional toward their work and the results of their impact which is not the case when the observers are not the participants of the observed actions and events. The other reason is related to the procrastination or delaying of reaching the decisions for future times. Finally, some people feel aversion toward the loss – the loss aversion which is why during comparing of the equivalent sums they tend to ascribe relatively higher negative value to the potential expenses than to positively evaluate the potential benefits (Капелюшников, 2013, p. 78).

The endowment effect is closely related to the above mentioned mechanism and this effect is related to the change of relation toward things in the sense of evaluating them higher right after getting ownership over them. As a matter of fact the value of certain goods is in the eyes of individuals considerably higher when they are in their property, which however is not the case when these goods are not owned by them. That is why people appreciate certain diploma more after they get it or they value their houses more after they have built them. It is present even more when the individuals treat their capital that according to their strong belief they obtained by continuous abstinence from spending. That is why it is not surprising "that the minimum compensation that people demand to give up a good has been found to be several larger than the maximum amount they are willing to pay for commensurate entitlement" (Knetsch, 1989, p. 1277).

4. BEHAVIORAL ECONOMICS IN THE FUNCTION OF THE RATIONAL CHOICE AND THE 'NEW' PATERNALISM

Although the behavioral economics doesn't interpret the economic behavior in accordance with the standard model of rational choice, this doesn't mean that one can't find the elements of any logical connection. The relationship between them is not one sided because the behavioral economics although it rejects the realism of the models of rational choice, doesn't question their normative demands and intentions. By pointing out the fact that people can make choices which are not consistent with their best interests, the representatives of the behavioral economics come to the idea that the paternalistically oriented policy can help the individuals to make better and decisions of higher quality. In

this way we come to the affirmation of the new normative program of the behavioral economics known under the term 'the new paternalism'.

In principle, the paternalism withstands "interference with a person's liberty of action justified by reasons referring exclusively to the welfare, good, happiness, needs, interests or values of the person being coerced" (Dworkin, 1972, p. 65). Although it doesn't have the mark of the state engagement, it is usual that under paternalism we primarily think about the activity in the field of bringing laws and measures that relax the process of decision making. Dependently from how deeply we enter the process of individual decision making, we can differentiate the 'hard' and the 'soft' paternalism (Madhadam, Gutmann, 2013, 1-20). Although when the other conditions are the same we give priority to the 'soft' paternalism and the characteristic of minimal limitation of the freedom of choice, we should not underestimate the justification of introducing some immediate prohibitions, direct limitations, as well as high taxes and other state charges. When measures of the 'soft' paternalism don't give the desired results, it is justified that the state intervenes by a 'fierce' limitation of the free choice.

The instruments of the state policy that are supported by the 'new' paternalists represent the complex combination of the legislative and administrative prohibitions, taxes, offering information that is needed, as well as certain means of persuading and manipulating with the 'architecture' of choice. It is not only about the new original recommendations but also about the multitude of the usual instruments of the state regulations which were used before. In principle, the behaviorists find all forms of the government regulations to be desirable and allowed if they bring about the efficient prevention and correction of the cognitive and psychological biases and mistakes (Rizzo and Whitman, 2009, p. 910).

Although the argumentation about the new paternalism is theoretically rather convincing, the practical realization of the paternalistic actions is not simple. In the conditions of the existence of the 'multiple I' it is necessary to determine which are the 'real' preferences of the individuals-which segments of choice should be taken as a starting point, and what can be left out. The additional problem is that the individuals can make not only useful, but from the standpoint of their interests wrong decisions. The fact that we supposedly know what is for our best interest is not automatically guaranteeing that we will behave in accordance with this. For example, the addicts continue with the self-destructive habits, although they have the expenses related to health, money, work and family ties.

Therefore direct limitations and prohibitions are less supported by the representatives of the behavioral economics and the 'new' paternalism than some traditional instruments of the government regulations such as sin taxes (alcoholic drinks, smoking, hazardous games) and the unhealthy food and drinks (greasy food, carbonated beverage etc) (O'Donoghue, Rabin, pp. 190-91). By enlarging the expenses related to the consummation of the harmful goods (junk food), 'sin taxes' can lessen the negative consequences, caused by the defect will and hyperbolic discounting, redirecting in this way the individuals of the bounded rationality to the more reasonable and socially acceptable behavior.

The actions of the individuals that are contradicting with their own interests, among other things, happen because they don't have sufficient information and unlimited cognitive capabilities. In order to prevent this and to direct the individual in the right way it is desirable to use the paternalistic intervention which would lead the individual to make the decision that he himself would make if he was deciding on the completely rational basis. The contribution of the behavioral economics in the field of promoting the state regulations can be best seen through the support of the process of manipulation with the

'architecture of choice' (Santos, 2011, p. 720; Wright, Ginsburg, 2012, p. 1056). It is related to the fact that the government is due to make a choice for and instead an individual in certain cases, since we can assume that he cannot deal with such a task in certain situations. For example, one could propose to the workers to automatically take part in the savings plans (Sunstein, Thaler, 2003, p.1172) which helps in excluding the mistakes connected with the inconsistency, the weakness of will, the hyperbolic discounting etc.

When we talk about the Republic of Serbia, and having in mind the negative experiences with the engagement of the state up to now, as well as the absence of the expected effects on the basis of its measures and actions, a question that arises is concerned with the theoretical relevancy and practical basis of the state interventionism as such. It seems that a certain progress can be made by the 'new' behavioral economics, whose research helped us to be a step closer to the understanding of the behavior of the economic actors. Together with this, the presumptions for the affirmation of the 'new' paternalism would be created and the creating of the corresponding government measures and activities directed toward supporting the efficient allocation of resources. If we have in mind the fact that the carriers of the economic activity in Serbia still haven't accepted the elementary norms of the market behavior, then the need for the new behaviorist approach and reaffirming of the role of the state in the light of enabling and easement of the rational choice is even more prominent.

As opposed to the traditional paternalism, which from the perspective of the citizens of the Serbia is related to the need of the state to intervene in order to lessen the unequal share of the incomes and the contribution to the realization of the idea of equality, the 'new' paternalism is directed toward helping the people to enlarge the level of their own welfare. This means that the role of the state is not in reacting and helping people after they have already certain, often wrong decisions about the allocation of the rare resources. Instead it is desirable to define the thought-out engagement of the state with the aim of improving the quality of the individual decisions. That is why the paternalistic syndrome embodied in the expectations of the citizens that the state will protect them even when they haven't accomplished the planned aims, should be changed and brought back into the realistic frames where the state is expected to make relative the problems that could possibly appear as a consequence of the cognitive and psychological limitations, to partly solve or even prevent them. In accordance with this, the citizens should gradually give up the beliefs about the government's responsibility to provide them medical treatments, education and job, and would gradually accept the market norms of behavior where the role of the state would be to make them capable adequately directed toward making rational decisions.

CONCLUSION

In spite of the efforts of some authors to point out that all the critiques of the neoclassical maximising hypothesis were futile, it is certain that the real rationality of the economic subjects deviates from the neoclassical model of the maximising rationality. If we add the fact that in the actual circumstances there is a higher level of uncertainty, then the question of sustainability of the model of the maximising reality becomes even more relevant. It seems that in this sense special attention should devote arguments of behavioral economic theory which related to the identifying psychological dysfunctions and anomalies. This is mainly about mistakes and failures that include the inconsistency related to the discounting, the changeability of the psychological and emotional state, the dependency

from the context, the lack of self-control, too strong optimism, the orientation toward the status quo etc.

The denying of the 'illusionist' model of unlimited rationality does not mean that the rational efforts of the economic subjects should also be denied, as well as the intentions of the individuals to be rational. Instead, from the point of view of the behavioral economics, it is desirable to reconstruct the actions of the individuals in certain situations based on to which we could assume how they would act in concrete circumstances, taking exclusively rational actions and activities. In this way the reconstruction of the behavior would get a form of the normative standard, on the basis of which it is possible to evaluate the effects of different forms of the state interference on the growth of the individual and social welfare.

On the basis of all the above statements we can easily conclude that the representatives of the 'new' behavioral economics have a double sided attitude toward the standard model of the rational choice. When they have in mind their descriptive character, they reject it determinately. However, when they observe it in the sense of the normative ideal, they not only accept it but also defend it fiercely. Having in mind that the behavioral imperfection leads us into the situation that people can make choices which are not consistent with their best interests, the representatives of the behavioral economics came to the idea that the paternalistically oriented state can help the individuals to make better decisions.

When observed in this way, the state intervention is turning into a tool, with the help of which we can bring 'closer' the real behavior of the boundedly rational individuals to the ideal of the full rationality. In this way we come to the affirmation of the new normative program of the behavioral economics known as 'the new paternalism'. The opposing opinion to the classical liberal tradition that takes the bounded rationality of the individuals as an argument in favor of not spreading and broadening of the quantity of state interference in the sphere of economy and private life, the 'new paternalism' pushes forward the idea of the premeditated engagement of the state directed toward reaching a higher level of rationality of the economic actors. Therefore, all the mentioned ideas presented in the paper can be perceived in the context of the contribution to the affirmation comprehension of failures related to the psychological dysfunctions, which confirmed the basic hypothesis that the behavioral analysis of economic choice provides powerful instrumentalist support for designing government measures directed toward improvement quality of human decisions.

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BIHEVIORALNA ANALIZA EKONOMSKOG IZBORA: DOPRINOS UNAPREĐENJU EKONOMSKE RACIONALNOSTI

Ako počemo od pretpostavke da je zadatak teorijske analize kompleksne društveno-ekonomske stvarnosti da pruži određena saznanja čijom se praktičnom primenom može doći do unapređenja i poboljšanja te stvarnosti, onda to ekonomsko-teorijski mainstream obično čini polazeći od aksioma racionalnosti. Sa druge strane, ako imamo u vidu aktuelne empirijske podatke o brojnim problemima i neefikasnom funkcionisanju ekonomskih aktera, onda se postavlja logično pitanje da li bi pretpostavku o neograničenoj racionalnosti ekonomskih subjekata trebalo olako idealizovati. Polazeći od toga da bihevioralna ekonomija ima posebnu ulogu u snažnom kritičkom nasrtaju na "tvrdo jezgro" neoklasičnog mejnstrima, u radu se govori o brojnim psihološkim ograničenjima koja prate proces ekonomskog odlučivanja, kao i mogućnostima njihovog prevladavanja. S tim u vezi posebno se apostrofira značaj bihevioralne analize i njene instrumentalističke podrške usmerene na unapređenje ekonomske racionalnosti i poboljšanje kvaliteta ljudskih odluka.

Ključne reči: *racionalni izbor, bihevioralna ekonomija, bihevioralne anomalije i predrasude, „novi“ paternalizam.*