

BEHAVIOURAL ECONOMICS: EVOLUTION OF DEVELOPMENT AND FORMATION OF THE CONCEPT

Nataliia TRUSHKINA⁶⁰, PhD in Economics, Senior Researcher
Tamila PATLACHUK⁶¹, PhD Student

ORCID: <https://orcid.org/0000-0002-6741-7738>

ORCID: <https://orcid.org/0009-0007-4093-6697>

Abstract: *The article presents the main concepts and theories of behavioural economics. This area has been extremely popular and relevant in recent years in the economic sphere due to its novelty and change in the management and marketing paradigm, namely, consumer orientation.*

Economic theory is a science that studies the maximum satisfaction of human needs with limited resources, which contains many current economic models and laws built mainly with a limited view of both the producer (seller) and the consumer. This article examines concepts mainly related to how people interact in the economic sphere, and compares the views of representatives of modern behavioural economics on this aspect.

Today, behavioural economics is one of the most popular and in-demand economic areas, because it is closest to the behaviour of real economic agents. Theories of behavioural economics are used everywhere nowadays, so it is necessary to conduct more in-depth research in this area.

In this regard, the purpose of the article is to review the main stages of the formation of behavioural economics and determine the essence of this area. The main objectives: to determine the prerequisites for the formation of behavioural economics; to make a brief overview of the postulates of the main economists and their concepts; to define scientific views on the subject of behavioural economics; to consider the stages of transformation from traditional economic views to improved modern approaches.

Thus, as a result of the study, the main stages of the formation and development of the theory of behavioural economics were determined, and the fundamental differences of scientific points of view were revealed through the prism of evolutionary and historical development.

Key words: *behavioural economics, stages of formation, concept, theories, management, consumer.*

JEL: D11, D12.

1. Introduction.

The development of social relations and the growth of the human factor in modern economic systems necessitated the elimination of the existing contradictions of traditional economic theory, which arise as a result of a simplified understanding of the driving forces and factors of economic behaviour.

For a long time, based on ideas about man as a rational being who should maximize utility, in modern conditions, traditional economic theory is no longer able to provide a sufficient level of probability in the forecasts of his economic behaviour, and therefore – in the forecasts of the dynamics of economic systems, an integral a component of which is economic behaviour.

⁶⁰ nata_tru@ukr.net, Research Center for Industrial Problems of Development of the NAS of Ukraine (Kharkiv, Ukraine);

⁶¹ tpatlachuk@ukr.net, Research Center for Industrial Problems of Development of the NAS of Ukraine (Kharkiv, Ukraine).

Bridging the gap between traditional economic theory and the real behaviour of economic agents was facilitated by the emergence of an interdisciplinary field of knowledge that uses the knowledge and approaches of social sciences to explain and predict economic behaviour, and which received the name “Behavioural Economics”.

Its task is to clarify economic models that determine the real behaviour of economic agents by taking into account the action of cognitive, emotional and social factors. This, in turn, determines the need to form ideas about the system of factors of economic behaviour, to master the tools and methodology of their assessment, modelling and forecasting.

The priority direction of modern behavioural economics is the methodology of identifying systemic errors, both of the person making the decision and of those persons whose economic behaviour is predicted. Knowing the factors and conditions that lead to characteristic cognitive distortions allows you to build reliable prognostic models. Also, they make it possible to prevent or use systematic errors of people, thereby increasing the level of control in socio-economic processes.

The ability to predict the likely occurrence of system errors allows you to take measures to prevent them in advance, take into account existing patterns when forecasting the economic behaviour of various market entities, and thus improve the quality of management decisions and ensure the improvement of the efficiency of activities both at the individual level and at the levels of organization.

2. Basic content.

In practice, it turns out that, contrary to the opinion of the classics, in most cases the consumer acts irrationally, guided by some emotions, marketing tricks and other subjective feelings. In the conditions of the modern post-industrial and information society (O. Harmash et al., 2024; N. Trushkina, 2019), which is characterized by a large amount of information and a huge number of goods, it is quite difficult to make a truly reasonable and rational choice. Many outstanding economists (G. Becker (1976); C. Camerer (2003); R. Cyert & J. March (1962); E. Higgins (1998); D. Kahneman & A. Tversky (1979); A. Maurice (1953); J. Neumann & O. Morgenstern (1944); H.-R. Pfister & G. Bohm (2008); H. Simon (1955); D. Scharfstein & J. Stein (1990); H. Shefrin & M. Statman (2000); R. Thaler (1980, 1985, 2015); X. Wang, F. Simons & S. Bredart (2001)) have contributed to the development of behavioural economics, but it should be remembered that this area of research affects both economic and psychological science.

The basis of behavioural economics is that, unlike economic theory, behavioural economics emphasizes the fact that a person has his own psychological characteristics and sometimes they are driven not by rational calculation, but by motives that can only be explained from the point of view of psychology and sociology. This explains the fact that a significant portion of economists studying behavioural theory in their main profile are psychologists. Some of the most famous are D. Kahneman and A. Tversky (1979). However, it should be noted that adherents of this area of research do not reject the concept of “homo economicus”, but only refute its absolute effect in most cases of economic behaviour. Below, we will consider the main theories and concepts of such a promising and relevant area as behavioural economics.

For many years, several basic principles of behaviour of such economic agents as the consumer (buyer) and the producer (seller) dominated economic science. One of the concepts was proposed by

J. S. Mill (1848, 1871) and was called “homo economicus”, which in Latin means “economic man”. This model was followed by many economists. In particular, the “invisible hand of the market”, founded by A. Smith (1776), was based on the fact that not only the consumer, but also the producer, satisfying their personal interests, consciously or unconsciously take into account the interests of the opposite side. The basis of this “law” is internal egoism and rational calculation of utility for the buyer and profit for the seller. Paradoxically, Adam Smith also recognized that the consumer is guided not only by “cold calculation”, but also by certain moral qualities and emotions. In his work “The Theory of Moral Sentiments” (1759), A. Smith described the meaning of such concepts in economics as “fairness” and “justice”.

If we talk about the global goal of behavioural economics, we can say that it is designed to find an answer to the question of how changes in physical quantities in the external world affect their perception by the subject. In other words, there are specific and measurable physical quantities (speed, amount of money, time), the values of which can be subjectively perceived by people (speed, value, elapsed time).

It is necessary to formulate laws that link subjective sensations in the human brain with the objective values of these quantities in the real world. One of the first to formulate such a pattern was the Swedish scientist D. Bernoulli (1738). In 1738, he came to the conclusion that the value of money is determined by a logarithmic function of its quantity. Thus, with an increase in money, its value for the subject gradually decreases. From the point of view of the classical approach, the value of money should increase proportionally to its quantity, but the perception of value by the person himself is not always rational. Also, Bernoulli, one of the first scientists, who determined that people are absolutely not inclined to take risks, since there is a probability that the worst outcome will occur.

Later, A. Maurice (1953) conducted an experiment in which he confirmed that people are more likely to choose a less risky option than a more profitable one. The essence of the experiment was that respondents were offered two options to choose from: winning a million with a 100% probability or winning 2 million with a 50% probability. From the point of view of rational calculation, both of these options are equivalent, but almost all respondents choose the first option.

Thus, people are not always guided by logic and mathematical calculations; sometimes they make a choice intuitively and prefer to have a guarantee of a minimum win than to take a risk for a large one. This paradox was named after its creator – “Allais's Paradox”. The author himself was awarded the Nobel Memorial Prize in Economics in 1988 for his work “In Search of an Economic Discipline” (A. Maurice, 1943).

At the end of the 20th century, Bernoulli's theory of the subjective value of wealth was further developed. D. Kahneman and A. Tversky (1979) significantly expanded his theory by explaining that the starting point of wealth is also important. For example, if the owner of four million wins 2 million instead of 8, he will most likely be upset. If this happens to the owner of one million, he will certainly be happy, because his wealth has increased threefold. In particular, Kahneman and Tversky explained in Prospect Theory that a person simply likes to win and does not like to lose. And this does not depend on the amount of winning or losing. Moreover, the effect of losing is felt much more vividly than from winning, all other things being equal. D. Kahneman and A. Tversky cite a ratio of 2.5 to 1. For Prospect Theory, developed by D. Kahneman and A. Tversky in 1979, the former received the Nobel Prize in Economics.

The theory itself consists of three provisions. The first proposition is that the attitude towards money is determined not simply by the presence of this sum in the subject's pocket, but by the circumstances under which this sum was received. To better understand their theory, let's give a simple example: a subject has a certain sum in his account, let's say 500 conventional units. From the point of view of economic theory, the consumer evaluates this sum in connection with the quantity and quality of goods that he can buy with it. In the course of experiments, A. Tversky and D. Kahneman found out that this is not all that the subject determines the value of money by. What is important is how he received this sum. If, for example, he played the lottery and expected to receive 10,000 conventional units, but received 500 conventional units, then he will probably be upset than happy, even if he spent 100 conventional units on the ticket.

The second proposition states that people feel losses more emotionally than gains. D. Kahneman and A. Tversky (1979) give the ratio of the effect of losses to the effect of gains as 2.5 to 1.

The third proposition of their theory is called the “Illusion of Sunk Loss”. It states that the more money we spend, the less we feel its additional losses. Let's give another example: a young man goes to a store with the intention of buying a new car. He talks to the manager, studies each car in detail and, finally, makes his choice. Then he goes to the checkout and here the manager offers him an additional service: installation of a Hi-Fi audio system. The buyer, without much thought, agrees to the purchase and buys the audio system along with the car. A year later, the happy owner of the vehicle comes to the same store and meets the same manager, who this time offers him to cover the seats of his car with leather. The cost of this service is equal to the cost of the audio system, moreover, our hero is a fan of leather goods and the presence of leather seats will bring him more pleasure than the audio system he bought earlier. But this time he does not agree to the purchase. What happened? The costs of these services are equal, while leather seats are preferable to the audio system for the client, but he bought the latter, while refusing to spend money on the former. From the point of view of “homo economicus” this is an insoluble paradox. However, D. Kahneman and A. Tversky (1979) found an explanation for this phenomenon from the point of view of psychology. According to them, in the first case, due to spending a large sum of money on a car, the buyer perceived the purchase of an audio system as less expensive. Indeed, in comparison with the price of a new car, the price of an audio system seems almost insignificant. In the second case, the buyer compares the cost of leather upholstery with virtually zero, because there is nothing else to compare the price of this service with. Accordingly, the purchase seems to him not so necessary and cheap. The effect of this effect is actively used by marketers in order to sell related products. A. Tversky and D. Kahneman are considered the founders of behavioral economics as a separate field of research. In 2002, cognitive psychologist D. Kahneman received the Nobel Prize in Economics “for his application of psychological methods to economic science, especially to the study of judgment and decision making under uncertainty”.

The next Nobel laureate who contributed to the development of behavioural economics was R. Thaler, Professor Emeritus of Behavioural Science and Economics at the University of Chicago Graduate School of Business. Thaler was an advisor to US President Barack Obama. Together with Cass Sunstein, he authored the book *Nudge: The Architecture of Choice* (2008), which discusses the Nudge Theory. C. Sunstein and R. Thaler (2008) definite nudge as an action that gently guides a buyer to make a certain choice. The concept also consists of several provisions. The main one is that

quite often the consumer makes purchases automatically, without thinking much about the usefulness of this purchase. Moreover, the consumer can be persuaded to make a certain choice, which is regularly used by sellers and marketers. For example, cheap candies or gum in grocery stores are most often located on the shelves near the checkout. This is done with the expectation that the consumer will definitely pay attention to these products when going to the checkout, due to their convenient location. In most cases, sweets and chewing gum are quite cheap, and the consumer, without thinking, buys them in addition to his main purchase.

In this example, we can identify the effect of two theories at once. From the “nudge theory”, the provisions on the inability and unwillingness of people to thoroughly plan their expenses and the effect of the nudge itself (in this case, the placement of products in a visible place) on the consumer demonstrate their effect.

But here we can also track the effect of the “Prospect Theory” developed by Thaler's colleague D. Kahneman et al. (1982), because if the consumer buys a chocolate bar in addition to a full basket of products, the provision on reducing sensitivity to losses will apply. "Nudge Theory", as well as all the above theories, makes up behavioural economics. Of course, there are many more theories themselves, but it was the concepts presented above that had a significant impact on the formation of behavioural economics as an independent discipline.

Thus, behavioural economics is a branch of economic theory that takes into account explicitly the psychological characteristics of human perception, judgment, and action when making certain economic decisions. Taking these characteristics into account makes it possible to improve the explanatory power of economic theory by introducing additional assumptions about the behaviour of agents, moving from the “hackneyed” assumption of rational agents maximizing utility as the only possible basis for economic theory to more realistic situations and, accordingly, to constructing models with higher explanatory power.

3. Conclusions.

Based on the above, we can come to the following conclusion. One of the approaches existing in modern theory, studying the irrational behaviour of various economic agents, is considered to be a relatively new science – behavioural economics, created at the junction of two sciences: psychology and economics, and has already formed into an independent direction.

Behavioural economics is one of the promising and actively developing areas in economics and management. Fundamental importance it is given to human actions in real life in real situations, and not to theoretical models or laws. Most of the concepts of behavioural economics have been tested and obtained experimentally.

At the moment, they are actively used by marketers in order to increase sales of products or services, as well as to transform the customer relationship management system (A. Kwilinski et al., 2020, 2022, 2023; Trushkina & Patlachuk, 2023). Of course, in addition to adherents, behavioural economics also has critics. They argue that in real conditions, a person, at least, strives for rationality. Another major criticism from traditional economists is that the concepts of behavioural economics are nothing more than a group of disparate phenomena identified in practice. There is no clear basic theory, yet that could generalize and build a unified system that would incorporate all the effects and cognitive biases. The development of behavioural economics itself is a fairly long process that lasted for three centuries. It

began with Bernoulli's theory. Subsequently, through the efforts of Daniel Kahneman, Amos Tversky, Richard Thaler and other economists, behavioural economics evolved to its current state.

The emerging and practically applicable directions of development of behavioural economics are very promising, and the results obtained from their application help to hope for a fairly successful solution to many pressing problems of humanity. It has been proven that it is impossible to refuse to consider and understand behavioural economics at the current stage of development, since the behavioural approach: is appropriate for considering the activities of various entities at different levels of management: as an individual and an organization, as well as markets and regions; allows us to identify those manifestations of the underlying motives of the activities of various agents that cannot always be described from the standpoint of the accepted canons of traditional economics. In further studies, it is planned to perform a bibliometric and trend analysis of research on the behavioural economics' problems.

Bibliographical references.

1. Becker, G. S. (1976). *The Economic Approach to Human Behavior*. University of Chicago Press, Chicago, USA.
2. Bernoulli, D. (1738). Specimen Theoriae Novae de Mensura Sortis. *Commentarii academiae scientiarum imperialis Petropolitanae*, 5, 175-192.
3. Camerer, C. (2003). *Behavioral Game Theory: Experiments in Strategic Interaction*. Princeton University Press, Princeton, NJ, USA.
4. Cyert, R. M., & March, J. G. (1962). *A Behavioral Theory of the Firm*. 2nd ed. Prentice Hall, Englewood Cliffs, NJ, USA.
5. Harmash, O., Hubarieva, I., Harmash, T., & Trushkina, N. (2024). Relationship between the concepts of “digital transformation” and “industry 5.0”: bibliometric analysis. *Intellectualization of logistics and Supply Chain Management*, 24, 89-106. <https://doi.org/10.46783/smart-scm/2024-24-10>.
6. Higgins, E. T. (1998). The aboutness principle: A pervasive influence on human inference. *Social Cognition*, 16, 173-198.
7. Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk. *Econometrica*, 47, 263-291.
8. Kahneman, D., Slovic, P., & Tversky, A. (1982). *Judgment under uncertainty: Heuristics and biases*. Cambridge University Press, New York, USA.
9. Kwilinski, A., Zaloznova, Yu., Trushkina, N., & Rynkevych, N. (2020). Organizational and methodological support for Ukrainian coal enterprises marketing activity improvement. *E3S Web of Conferences*, 168, 00031. <https://doi.org/10.1051/e3sconf/202016800031>.
10. Kwilinski, A., Hnatyshyn, L., Prokopyshyn, O., & Trushkina, N. (2022). Managing the Logistic Activities of Agricultural Enterprises under Conditions of Digital Economy. *Virtual Economics*, 5(2), 43-70. [https://doi.org/10.34021/ve.2022.05.02\(3\)](https://doi.org/10.34021/ve.2022.05.02(3)).
11. Kwilinski, A., Trushkina, N., Birca, I., & Shkrygun, Yu. (2023). Organizational and Economic Mechanism of the Customer Relationship Management under the Era of Digital Transformations. *E3S Web of Conferences*, 456, 05002. <https://doi.org/10.1051/e3sconf/202345605002>.
12. Maurice, A. (1943). *A la Recherche d'une Discipline Economique. Premiere Partie. L'Economie Pure*. Impr. Ateliers Industria, Salles-d'Angles, France.
13. Maurice, A. (1953). Le Comportement de l'Homme Rationnel devant le Risque. Critique des Postulats et Axiomes de l'Ecole Americaine. *Econometrica*, 21(4), 503-546.
14. Mill, J. S. (1848). *Principles of Political Economy with Some of their Applications to Social Philosophy*, vol. 1 (1 ed.), John W. Parker, London, UK.
15. Mill, J. S. (1871). *Principles of Political Economy with Some of their Applications to Social Philosophy*, vol. 2 (7 ed.), Longmans, Green, Reader & Dyer, London, UK.
16. Neumann, J., & Morgenstern, O. (1944). *Theory of Games and Economic Behaviour*. Princeton University Press, Princeton, NJ, USA.

17. Pfister, H.-R., & Bohm, G. (2008). The multiplicity of emotions: A framework of emotional functions in decision making. *Judgment and Decision making*, 3, 5-17.
18. Simon, H. A. (1955). Behavioral Model of Rational Choice. *Quarterly Journal of Economics*, 69(1), 99-118.
19. Scharfstein, D., & Stein, J. (1990). Herd Behavior and Investment. *American Economic Review*, 80, 465-479.
20. Shefrin, H., & Statman, M. (2000). Behavioral Portfolio Theory. *The Journal of Financial and Quantitative Analysis*, 35.
21. Smith, A. (1759). *The Theory of Moral Sentiments*. Oxford University Press, Oxford, UK.
22. Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Methuen & Co., Ltd., London, UK.
23. Thaler, R. H. (2015). *Misbehaving: The Making of Behavioral Economics*. W. W. Norton & Company, New York, USA.
24. Thaler, R. (1980). Toward a Positive Theory of Consumer Choice. *Journal of Economic Behavior & Organization*, 1(1), 39-60.
25. Thaler, R. (1985). Mental Accounting and Consumer Choice. *Marketing Science*, 4(3), 199-214.
26. Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving Decisions About Health, Wealth, and Happiness*. Yale University Press, New Haven & London, UK.
27. Trushkina, N. (2019). Development of the information economy under the conditions of global economic transformations: features, factors and prospects. *Virtual Economics*, 2(4), 7-25. [https://doi.org/10.34021/ve.2019.02.04\(1\)](https://doi.org/10.34021/ve.2019.02.04(1)).
28. Trushkina, N. V., & Patlachuk, T. V. (2023). The Scientific and Methodological Provision of the Formation of a Consumer Relationship Management System in the Digital Space. *Business Inform*, 9, 331-345. <https://doi.org/10.32983/2222-4459-2023-9-331-345>.
29. Wang, X. T., Simons, F., & Bredart, S. (2001). Social cues and verbal framing in risky choice. *Journal of Behavioral Decision Making*, 14(1), 1-15.