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BEHAVIORAL AND EXPERIMENTAL ECONOMICS
(for foreign students)

Electronic educational and methodological complex
for the specialty 7-06-0311-01 «Economics»

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В учебно-методическом комплексе рассмотрены теоретические основы поведенческой и экспериментальной экономики: теория перспектив, поведенческая теория фирмы и потребления, методы принятия решений в условиях риска и неопределенности, а также основы поведенческих финансов. Представлен материал для проведения семинарских занятий. Комплекс содержит материалы для проведения текущей и итоговой аттестации, элементы учебно-программной документации, перечень учебных изданий и информационно-аналитических материалов, рекомендуемых для изучения учебной дисциплины.

Использование данного учебного пособия позволит студентам специальности «Экономика» освоить дисциплину «Поведенческая и экспериментальная экономика». Материалы учебно-методического комплекса адаптированы для иностранных студентов.

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СОДЕРЖАНИЕ

INTRODUCTION

The electronic educational and methodological complex "Behavioral and Experimental Economics (for foreign students)"is designed to implement the requirements of educational programs and the educational standard of the standard curriculum of the work program for the discipline Behavioral and Experimental Economics of the second stage on the specialty 7-06-0311-01 "Economics".

EEMC combines the structural elements of scientific and methodological support of education, which is designed to ensure the education of the specialty 7-06-0311-01 "Economics improving its quality and is based on the results of fundamental and applied scientific research in the field of education.

EEMC constructed by the classical scheme and includes sections: theoretical, practical, knowledge control and auxiliary. The theoretical section of the EEMC contains lecture materials for the theoretical study of the discipline in the amount established by the curriculum of the specialty. The practical section of the EEMC contains assignments for the seminars. Knowledge control section contains a test for current certification and exam questions for the final certification. Auxiliary section contains elements of educational and program documentation, a list of educational publications and information and analytical materials recommended for the study of the discipline.

In compiling the EEMC used some educational publications, officially approved or approved as the appropriate type of educational publication by the Ministry of Education of the Republic of Belarus, recommended by educational institutions, publications, reflecting the latest scientific achievements in the field of behavioral and experimental economics. Materials of the textbook "Behavioral and Experimental Economics"by I.V. Monakhova were used as a fundamental source for compilation of the textbook.

The materials of the complex can be used by full-time and part-time undergraduates of higher education in "Economics"in the independent study of the discipline, managed to work independently and in the classroom. The course book is adapted for foreign students.

THEORETICAL SECTION

1. INTRODUCTION TO BEHAVIORAL AND EXPERIMENTAL ECONOMICS

Evolution of behavioral economics. Founders of behavioral economics. The development of behavioral economics research.

The methodology of behavioral economic theory. The subject of behavioral economics research. The interdisciplinary nature of behavioral economics. Research methods of behavioral theory. The nanoeconomic basis of behavioral economics. The "standard model"of an economic agent and possible directions of relaxation of assumptions: dynamic stability of preferences, decision-making under conditions of risk, social preferences.

Sources: [3, 5, 6, 16]

1.1 Behavioral and experimental economics. The history of behavioral economics

Behavioral economics is a relatively new science that is interdisciplinary in nature and is at the interface of two sciences: psychology and economics. The objectives of the discipline of behavioral economics are the study of topics relevant to modern science and economic practice, revealing how various psychological phenomena, emotions and group dynamics affect economic decision-making. The study of behavioral economics will contribute to a deeper and more modern understanding of economic phenomena, taking into account their psychological component, the development of skills to use some economic and psychological patterns [3, p. 5].

Behavioral economics is a direction of economic research, which studies the influence of social, cognitive and emotional factors on economic behavior, making economic decisions by individuals and institutions and the consequences of this influence on market variables (prices, profits, resource allocation). The main object of the study of behavioral economics is the boundaries of rationality of economic agents.

Behavioral models studied in behavioral economics, most often combine the achievements of psychology with neoclassical economic theory, covering a range of concepts, methods and areas of research. Specialists in behavioral economics are interested not only in the phenomena occurring in the market, but also in the processes of collective choice, which also contain elements of cognitive errors and egoism in decision-making by economic agents [16].

Economic science is gradually expanding, subjectively identifying the levels of analysis of the theory and practice of economic life of society. Under the influence of globalization and informatization of society in modern conditions there is a complication, evolutionary expansion and appearance of a new scientific direction of research – behavioral economics, which is understood as synthesis of psychology and economics, interrelation of human psychology and economic behavior of market agents.

Behavioral and Experimental Economics represent modern branches of economic science that have fundamentally transformed traditional theories of decision-making. Unlike classical models that assume perfect rationality, these disciplines explore how real people make choices under the influence of cognitive biases, emotions, and social norms. Behavioral economics, drawing on psychology, identifies systematic deviations from rationality—such as short-term bias (hyperbolic discounting) or framing effects. Experimental economics complements these insights by testing hypotheses in controlled settings, from laboratory games to field studies where participants make decisions with real financial consequences.

A key contribution of these fields is their shift from abstract models to empirically grounded theories. For instance, dictator game experiments have shown that people often sacrifice personal gain for fairness, while auction experiments reveal irrational overbidding (the "winner's curse"). Such findings have shaped behavioral approaches to public policy, such as *nudge theory*, which subtly guides choices without coercion – for example, through automatic enrollment in pension plans.

Today, these sciences continue to expand the boundaries of economics by integrating neuroscience (neuroeconomics) and big data. Their strength lies in combining rigorous experimental methods with a deep understanding of human nature, making them indispensable for predicting crises, designing marketing strategies, and even addressing climate change through behavioral incentives. Ultimately, they have turned economics from a science of hypothetical agents into a study of real people – with all their flaws, irrationalities, but also their capacity for altruism and cooperation.

At the beginning of its development, economic science was closely connected to psychology. For example, Adam Smith in his "Theory of Moral Senses"offered a psychological explanation of human behavior, describing such concepts as "honesty"and "justice and I. Bentham's theory of utility has a psychological basis. However, with the development of the neoclassical economic theory, economists took as a model for development the methodology of natural sciences, when the behavior of the object (in this case, economic behavior) is deduced from some predetermined assumptions about human nature. This is the concept of **"economic man"(RREEMM),** in which human behavior is considered to be fully rational. Almost simultaneously with its emergence, this concept was heavily criticized. Later, many authoritative proponents of neoclassical economic theory (F. Edgeworth, W. Pareto, I. Fisher) used more complex concepts from the point of view of psychology.

The RREEMM concept is an alternative model of human behavior in economic sociology and institutional economics, developed as a critique of the simplified view of Homo economicus. The acronym stands for:

Resourceful – a person is able to creatively use available means, including social connections and institutions.

Restricted – his actions are constrained by rules, norms, incomplete information and power structures.

Expectant – makes decisions based on subjective ideas about the future, and not only rational calculations.

Evaluating – constantly weighs costs and benefits, but the evaluation criteria are broader than monetary gain (e.g., fairness, reputation).

Motivated – driven not only by material interests, but also by values, emotions, identity.

Man – an emphasis on the social and cultural embeddedness of the individual.

The RREEMM model offers a realistic alternative to Homo economicus, portraying humans as socially embedded agents who navigate constraints while creatively leveraging resources. Unlike the simplistic rational optimizer, RREEMM acknowledges cognitive limits, institutional influences, social norms, and moral values. For instance, an entrepreneur might choose ethically sound over maximally profitable strategies, or consumers may pay premium prices for sustainable goods—demonstrating motives beyond material gain.

Developed by Hedstr?m and Swedberg, RREEMM synthesizes bounded rationality (Simon), social embeddedness (Granovetter), and institutional theory (North). It's particularly useful for analyzing behaviors where calculation, norms, and constraints intersect—from corporate decisions to policy reforms. The model highlights how economic actors interpret incentives through social and value-based lenses, making it pivotal for behavioral and institutional economics. Unlike Homo economicus (pure rationality) or Homo sociologicus (blind norm-following), RREEMM captures the dynamic balance between rationality, rules, and real-world complexity.

Researches of a person's role in economy, following changes of his role in real informational economy, required deeper analysis of psychic and cognitive sides of people's activity, and influence of these sides of life on behavioral models, on economic decision-making algorithm. Homo economicus model, which was convenient for formal economic constructions, was not satisfying because of apparent discrepancy with reality.

But if the role of man in formation of economic relations (his psychology, preferences, mistakes, attitude to mistakes, etc.) is so great, if man makes economy, then the question arises, what place in real economy, and hence in its theoretical versions, is occupied by objective ("iron") laws? Or, in another edition, to what extent human behavior can be explained (predicted, foreseen) on the basis of predetermined exogenous circumstances? Behavioral economics has proved in researches of the last years that people's preferences are endogenous while in classical theory they are invariable and set from outside. It means that they are subject to changes, what is more important they can be formed and changed "inside"people activity under action of different factors also perceived by behavioral model as endogenous. It became obvious that externally imposed objective circumstances (defined by the classical paradigm as objective laws) cannot adequately explain the behavior of economic agents and their consequences and therefore cannot adequately perform forecasting functions. The correlation of objective and subjective as a philosophical component of economic theory method requires new comprehension.

The emergence and development of economic psychology in the 20th century due to the works of G. Tard, J. Katona and L. Garai allowed to modify the original model of the person: the models of expected utility and models of intertemporal utility gained recognition, on the basis of which it became possible to make testable hypotheses about the decision-making process under uncertainty and time-differentiated choice. In the course of testing the hypotheses, choice anomalies were discovered and repeated many times, which later served to advance the science. In particular, Nobel Prize laureate M. Allee discovered a paradox that was later called the Allee paradox: in studies of the decision-making problem, which he first identified in 1953, a contradiction to the expected utility hypothesis was found.

The distinctive characteristics of behavioral economic theory as a separate scientific trend consist in the rejection of the "three whales"– the premise of rationality, self-interest pursuit and equilibrium. Behavioral economics is being formed as a new direction, which has shifted accents from development of formalized models of rational individual's behavior in different choice situations to the process of their experimental and empirical verification, clarifying the consistency (divergence) of traditional economic theory and its derived patterns and tendencies with the actual facts of economic activity.

Behavioral approach, in reality, inherent in the activities of various subjects: from individuals and firms to markets and regions, is systematically reproduced, becoming more complex and allows to identify the underlying motives of agents, not always following the canons of traditional economics.

The first ideas of **behavioral economics** are reflected in the works of famous economists: Adam Smith (1723–1790), the founder of economics as an independent science; Alfred Marshall (1842–1924), the creator of microeconomic theory; and John Keynes (1883–1946), the author of macroeconomic theory. In writings of these authors the theory of rational "economic man"was formed, the purpose of which is to gain profit and income. The defining feature of the concept is "economic egoism i.e. aspiration of a subject to maximize his own profit. The idea of "economic person"dominated in economics for a long time, taking new forms. The idea that irrational beginning – periodically arising waves of optimism and pessimism – determines the waves of business cycle was first put forward by J. Keynes. However, deeper research into "herd mentality"was only possible on an interdisciplinary level. Because of this, Keynesian theory was formalized by models that assumed too unrealistically high cognitive abilities of an individual. As a result, the new Keynesians argued with the new classics only about the rigidity of prices and nominal wages in opposition to their flexibility and the possibility of a rapid, automatic transition to a new equilibrium. The other pillar – the complete rationality of individuals (and their expectations) – as an object of constructive criticism was not taken into account. The framework of this concept did not embarrass researchers as long as they were economists.

Institutionalists T. Veblen, J. Commons, J. Dewey believe that rational calculation is far from being the only motive that determines economic behavior, institutions, habits and customs being the most important in comparison with it. T. Th. Veblen in his concept of demonstrative consumption interprets instincts (institutions) as ways (customs) of conscious and purposeful behavior that include: instinct of skill, idle curiosity, parental, inclination to acquire, set of egoistic inclinations, instinct of habit. From the point of view of institutionalists, they are the main determinants of consumer activity of households. Scientists singled out a number of effects connected with demonstrative consumption, in particular, the Veblen effect, in which increase of consumer demand, caused by the fact that product has higher price, which is the sum of two components: real and prestigious price, as well as the snob effect and joining the majority effect, is noticed.

At the beginning of the 20th century, a separate branch of psychological knowledge appeared – **economic psychology.** The development of industrial branch of economic psychology is connected with the name of G. M?nsterberg. M?nsterberg, and the marketing branch, which has received preferential development in Western psychology, was founded by G. Tard. It includes psychological problems of exchange, distribution and consumption. One of the brightest representatives of the marketing branch of economic psychology was the American psychologist J. Katona.

A contribution to the development of behavioral economics was made by behavioral game theory. **Behavioral game theory** is a branch of game theory that is engaged in adapting game-theoretical situations to experimental design.

This line of research focuses on three areas:

- mathematical theories explaining the social interaction of people in bargaining and the establishment of trust between them;

- constraints of strategic behavior and cognitive abilities to account for the steps of opponents;

- modification of strategies in the process of teaching people in practice.

The most famous scientists working in the field of behavioral

Game Theory: J. von Neumann and O. Morgenstern, G. Gintis, K. Kammerer, E. Fehr, J. Henrich.

The use of the mathematical apparatus of game theory in economic science in the second half of the last century was extremely fruitful. To the greatest degree it was shown in those sections of theory, the object of consideration of which is strategic interaction of economic agents among themselves in various conditions and the aspiration of resolving a conflict situation in the most optimal way.

Principles of game theory:

- principle of rationality;
- principle of common knowledge;
- the principle of exclusion of dominant strategies.

Game theory proves that if players do not change their strategy, sooner or later they will come to some equilibrium state in which the winnings can no longer be increased by continuing to follow their chosen line of behavior.

Ultimatum Game. This simple game situation has attracted enormous scientific attention, precisely because experimental outcomes differed significantly from the predictions of formal game theory, which implies that individuals pursue only their own self-interest. The first ultimatum game experiments were conducted by W. Guth, R. Schmittberger, and B. Schwarze in 1982.

Nash Equilibrium. A situation in a non-cooperative game in which no player can increase his winnings by making moves unilaterally, that is, without cooperating with other players.

Pareto Equilibrium. The situation in a cooperative game in which a group of players gets the maximum winnings (equally for all who cooperated), but any player can make a move unilaterally, which increases its gain at the expense of reducing the winnings of other players.

When it comes to public goods, a compromise of individual and group interests becomes achievable. The thesis that some people place the achievement of justice above their personal goals was also confirmed in another experiment conducted by J. Henrich.

J. von Neumann and O. Morgenstern, the founders of game theory, believe that the behavior of an individual consumer depends on the behavior of other participants in the relationship. It follows that in the process of interaction of subjects concerning consumption and disposable income distribution even stable belief systems can be destroyed, and then other variants of behavior are chosen. Indeed, it is possible to observe such phenomena in real life.

The results of researches of scientists-economists have given antropologists the additional argument in favor of that human nature initially inherent not only craving for material interests, but also aspiration to justice and cooperation with other people.

In summary, modern economics is undergoing a revolutionary upheaval, abandoning the simplified model of rational Homo economicus in favor of more complex and realistic concepts. Behavioural economics and the RREEMM model demonstrate that people's economic decisions are determined not only by cold calculation, but also by cognitive biases, social norms, emotions and values. Experiments such as the ultimatum game and the dictator game have proven that people often value fairness above personal gain, and markets are far from perfect equilibrium. The classical postulates of economics – absolute rationality, egoism and equilibrium – are giving way to more flexible theories based on empirical data. The RREEMM model emphasizes that economic agents act within social and institutional constraints, but at the same time use available resources creatively. An interdisciplinary approach that combines economics, psychology, and neuroscience has helped explain phenomena such as the Veblen effect, the winner's curse, and irrational consumption.

These discoveries have already found application in a variety of areas. In politics, nudge theory helps gently guide people's behavior without limiting their freedom. In business, understanding behavioral motives helps create more effective marketing strategies and management decisions. At the global level, taking human psychology into account is essential to combating climate change, inequality, and other modern challenges.

Economics can no longer ignore the subjectivity and variability of human preferences. As Adam Smith and John Keynes noted, the "iron laws"of the market are only part of a complex system where irrationality, the desire for fairness, and the ability to cooperate play a key role. The future of economic science lies in the synthesis of precise methods and humanitarian knowledge, where the model of a real person will replace the abstract Homo economicus. Only in this way can the economy remain relevant, predict crises and help society develop.

1.2 The methodology of behavioral economic theory. Behavioral economics

Behavioral economics is an area of economics that studies the influence of social, cognitive and emotional factors on economic decision-making by individuals and institutions and the consequences of this influence on market variables (prices, profits, resource allocation).

One of the most important tendencies in modern science is changing of rationality forms as basic postulate of neoclassical theory. The understanding of "rationality – irrationality"relation and how they influence on forms of economic activity changes cardinally. Scientists based on the results of psychological research in the field of decision-making prove that people do not always behave rationally, in their own interests, because of such behavioral traits as self-control problems, inability to distinguish between profit and loss, difficulties in choosing between large sets of parameters, complicated products, asymmetry in perception of profit and loss, etc. In this regard, many of the results of behavioral economics have become highly relevant to the development of economic policy.

Rationality – the ability to make the right decisions in one's favor.

In conventional, classical economics, the assumption of rationality means that in everyday life we compare all occurring alternatives (on any issue), and then choose the best one for us.

Within the framework of behavioral economics methodological approach is initially connected to criticism of rationality in human behavior which abilities are limited because of unavailability of full information and addiction to habits and emotions. Researchers focus attention on two important aspects of economic behavior:

- **Non-rationality** is a temporary phenomenon, a non-equilibrium state of the subject.

- **Irrationality** has systematic laws, which can be measured.

Irrationality is the distance that separates us from perfection. Irrationality is connected: with trust (a crisis of trust reinforces the general instability of the economy);

history, or narratives; justice; abuses; monetary illusions.

Causes of irrational behavior:

1. Confrontation between the present and the future. People are not predisposed to perceive reality through a long-term perspective.

2. the abstractness of money as a concept. One of people's strongest psychological barriers is the difficulty of perceiving the opportunity cost of money.

Irrationality in economic behavior reflects situations where individuals deviate from rational decision-making due to external circumstances, emotions, or cognitive overload. This state is unstable: over time, individuals may return to rational strategies – for example, after receiving additional information or when stressors are removed. A classic example is financial market panic: investors may engage in mass selling due to fear, but the market eventually corrects itself once the situation stabilizes. However, even temporary deviations can have a cumulative effect, potentially triggering crises. Research shows that irrationality is often linked to «bounded rationality» (H. Simon): people rely on simplified heuristics («rules of thumb») to make decisions under uncertainty, leading to systematic errors like underestimating long-term risks.

Unlike temporary irrationality, systematic irrationality consists of persistent, repeatable deviations from rational models, driven by deep psychological and social mechanisms. Examples include:

- *Anchoring effect:* People tend to rely heavily on the first piece of information they receive (the "anchor"), even when it's irrelevant.

- *Hyperbolic discounting:* A preference for immediate rewards over long-term benefits, despite their lower objective value.

These patterns can be quantified through experiments (e.g., measuring willingness to pay for a «fair» price) and are used in behavioral economics for forecasting. Crucially, irrationality is not random – it is structured by cultural norms and institutions, making it possible to manage through «nudges», such as automatic enrollment in pension plans.

Trust is a key factor connecting irrational behavior to macroeconomic processes. Crises of trust (e.g., bank runs) amplify irrational responses: individuals begin to follow herd behavior, ignoring objective data. Experiments like the «trust game» show that people tend to cooperate even when it contradicts short-term self-interest, but this tendency declines sharply in conditions of inequality or perceived injustice. Restoring trust requires transparent institutions and compelling «narratives» – stories that explain economic processes (e.g., central bank policies to manage expectations).

- *Narratives* (stories shaping perception) are a powerful tool for influencing behavior. Keynes referred to "animal spirits"(irrational optimism or pessimism) as a driving force behind economic cycles. Modern research confirms that negative news coverage can trigger a recession, even if fundamental indicators remain strong.

- *Fairness* – a socially conditioned criterion—often outweighs rational self-interest. Experiments like the «ultimatum game» demonstrate that people reject unfair offers even at a personal cost. In economics, this manifests in support for progressive taxation or boycotts of companies with unethical practices.

Irrationality is not mere "noise"but a systemic feature of the economy, requiring an integration of psychology, sociology, and institutional theory. Accounting for it enables the creation of more resilient systems—from corporate governance to regulatory policy.

Behavioral economics points to regular failures in rational behavior, systematic errors of economic agents in decision-making, and in this regard studies such phenomena as:

- *"herd behavior*
- *"contagion of ideas*
- *"fragmented thinking*
- *"collective euphoria*
- *"collective fear".*

Three main areas of research in behavioral economics:

Heuristics – often make decisions based on creative, unconscious thinking that is not always logically correct.

- *Perspective Theory.*

- *Fear of loss.*
- *Frustration.*
- *Status quo prejudice.*
- *Player error.*
- *Selfish bias.*
- *Money illusion.*

Frames – people use frames of meaning to understand and act on certain events.

- *Frame.*
- *Mental accounting.*
- *Attachment effect.*

Market inefficiencies – mistakes in market decision-making that lead to various market anomalies, including mispricing, inefficient allocation of resources. Anomalies in economic behavior: The preference effect. The possession effect. Injustice aversion. Reciprocal advantage. Intertemporal consumption. Preference for current consumption. Impulse investing. Greed and fear. Herd behavior. The sunk cost trap. Anomalies in market prices and incomes:

– *The riddle of stock returns. The effective wage hypothesis. Price rigidity.*
– *The limit on arbitrage transactions. The dividend trap.*
– *Distribution with a slowly decreasing "tail"(tendency to extremes).*
– *The calendar effect.*

In considering economic behavior, scholars generally identify three closely related components for analysis: 1) a person's decision is usually preceded by perception, comprehension, understanding of the situation and oneself in it, i.e. cognitive (cognitive) components; 2) subjective attitude, colored by feelings, i.e. affective (emotional) components; 3) action or, conversely, its restraint, i.e. conative (action-dynamic) components.

The main problems of economic theory, solved within the framework of behavioral economics:

a) Assumption on the axiom of independence, which does not correspond to reality for the theory of expected utility: to determine the choice of the consumer it is not enough to know only the set of alternatives – it is necessary to take into account the situation when the decision was made, because the agent may differently assess their gains and losses depending on the environment in which they are now;

b) the assumption of homogeneity of all goods (the initial stock effect: the agent values the goods that he originally had more than those that he can acquire as a result of exchange; thus, non-standard situations arise around the point of initial stock);

c) imperfect human memory and computational abilities, fraught with failure to achieve the best possible result;

d) the problem of discounting (in reality agents are more focused on short – term interests than on long – term planning).

In the rapidly changing economy of our time multifarious sides of economic behavior acquired special importance. In the modern world the material results of activity are strongly dependent on non-material motives, on the circumstances of moral and ethical order, on people's expectations, their trust, feelings etc., the effect of which does not correspond to the absence of these phenomena in the explaining economic models.

The changing reality requires changes in the methodology of cognition with a clear strengthening of interdisciplinarity (economic imperialism) and applied use of field research (experimental economics) to adjust economic behavior.

Co-evolution as applied to scientific theory means joint study of the phenomenon of economic behavior as an element of socio-economic system from the perspective of different sciences, co-development of theories, their parallel existence and evolution. Co-evolution of consumption theories is based on interdisciplinarity, i.e. research of the same phenomenon from different theoretical and practical angles within the framework of general economic science, and multidisciplinarity, i.e. integration of paradigmatic methodological principles of different sciences, the subject area of which includes consumption. The practical significance of multidisciplinary (polydisciplinary) methods is extremely high, they play the role of a tool in a particular science, with their help the ontological and epistemological ideas about the object of science can change. Multidisciplinary analysis enriches economic theory of consumption and can be realized in the framework of systematic approach, allowing to explore not only financial and economic, but also social, philosophical, cultural, psychological, historical determinants of human economic activity.

Economic exchange between people coordinates market, market mechanisms of prices, competition. Interdisciplinary approach represents the environment of economic activity more complex. People's behavior is formed under conditions of uncertainty, incomplete information. If we add to this the variety of motives in decision-making, irrationality inherent in people, which behavioral economics considers typical, the "saving function"of representative subject disappears when modeling macro-economics. The task arises of explaining the mechanism of coordination of behavior of subjects in economic exchange, where there is no "order where the "standard"price mechanism is disabled, where the principle of optimization does not operate, where subjects are non-representative, etc. Otherwise, economists will not be able not only to predict when the next crisis will occur, but also intelligibly explain why society does not disintegrate.

Behavioral economics is a theoretical branch of science, but its development is also closely linked to other branches of science. Contributions to the development of modern behavioral economics invariably come from:

- **Neuroeconomics** – the study of the responses of various parts of the brain to the environment and its changes, including in economic contexts.

- **Animal behavior studies** – an approach to studying the responses of animals most similar to humans, as well as studying the evolution of living beings and their behavior.

- **Computer simulations** are simulations of life situations on a computer as close to reality as possible, in which participants need to make a decision.

- **Conducting experiments** – these can be field experiments conducted under real conditions, as well as mental experiments composed on paper or with the help of computer simulations. Various surveys of participants are also often conducted.

The explanation of the laws of economics depends on an understanding of human beings and their motives for behavior. Human biology and psychology determine the behavior of the main functional unit of the economy: the producer and the consumer. Under the influence of the technological revolution, a new discipline appeared – cognitive **neuroscience.** The subject of the research of the given scientific discipline is explanation of processes of perception, memory and consciousness by activity of certain brain ensembles. On this basis, an interdisciplinary area is actively developing – neuroeconomics as a synthesis of neuroscience and economic science. Neuroeconomics is a new scientific discipline, which studies decision-making process and realistic modeling of human behavior.

It is important to note that behavioral economics differs from **ex-perimental economics,** which uses experimental methods to study economic issues, and not all areas of experimental economics are related to psychology. Despite the fact that many of the studies examine psychological aspects of decision-making, the experiments aim to explain the actions of institutions or are preliminary tests of the design of market mechanisms. At the same time behavioral economics does not always use experimental methods, mostly relying on theory and observation.

Thus, the phenomena of non-economic order supplement economic factors, give them additional energy, modify their form of manifestation, but are not "substitutes"for economic motives of behavior. Scientific innovations must be logically combined with the fundamental constructs of the theory. The fundamentality of theory provisions determines determinants of selection of scientific versions today.

1.3 Methods of behavioral theory research

Behavioral and experimental economics utilize various approaches to examine how individuals make economic decisions in real-life situations. Laboratory experiments represent one of the fundamental techniques, where researchers observe participants making choices in carefully controlled settings through economic games like ultimatum, dictator and public goods games. These controlled studies help identify consistent patterns where human behavior diverges from purely rational models, including preferences for fairness and emotional influences on decision-making.

Field experiments constitute another essential methodology, conducted in actual market environments such as retail stores or financial institutions. These real-world tests demonstrate how theoretical predictions translate into practice, showing how subtle modifications in presentation or wording can substantially alter consumer actions regarding savings behavior or environmentally conscious purchases.

Survey research and questionnaires serve as valuable tools for investigating people's self-reported preferences, attitudes and risk assessments. Behavioral economists frequently combine survey data with experimental results to bridge the difference between what people say they would do and how they actually behave in decision-making scenarios.

Contemporary research incorporates neuroscientific methods through neuroeconomic studies that measure brain activity during economic choices. These biological measurements provide insights into the neural processes involved in evaluating risks, rewards and perceptions of justice.

Together, these complementary methodologies allow economists to develop more comprehensive models of decision-making that incorporate not only rational calculations but also psychological, social and emotional dimensions. This multidimensional perspective contributes to designing better policies, commercial strategies and educational initiatives aimed at enhancing the quality of economic decisions in society.

Let us consider methods of experimental research. The semantic differential method (SD) was the basis for conducting the experiment.

The SR method belongs to methods of experimental semantics and is one of methods of construction of semantic space. This method was developed by a group of American psychologists led by C. Osgood during his research of synaesthesia mechanisms and was widely used in studies related to human perception and behavior, the analysis of social attitudes and personal meanings. It is used in psychology and sociology, mass communication theory and advertising, as well as in the field of aesthetics.

Semantic differential method is a combination of scaling procedures and method of controlled associations. The connection between the method of SR and the method of associations is shown in the works of Noble (1952) and A. Staats (1957), where a high correlation between the D index (Osgood's pragmatic value) and Noble's M index (a measure of associative connectivity of words) was proved. A measure of the proximity of the objects under study in the SR method is the similarity of the score profiles given on the SR scales.

As a method of controlled associations, semantic differential compares favorably with associative methods by its greater comprehensiveness. A researcher gets a numerical representation of standardized data which is easy for statistical processing. This method eliminates the possibility of associations on the principle of speech stamps, rhyming associations, that is, associations due to the similarity of the plan of expression and not the proximity of the content plan. On the other hand, the chosen scales may impose breakdowns of the studied material, which are insignificant for the examinee.

Experimental research shows that human behavior in situations when a person operates with money is predictable enough, although in some cases such predictions are out of line with classical economic theories. While the topic of "man and money"has long been considered the province of cultural sciences, recent research has shown that the biological mechanisms of the brain play a significant role in this. It turns out that brain operations are largely similar to the processes in economic systems. Researchers believe that study of psychology of money will help to improve human life and make it happier as a result.

A number of theoretical models have been developed to explain experimental results. However, according to V. Avtonomov, none of the models can realistically describe the whole set of experimental results. At the same time they explain and make it possible to predict a number of important regularities of human behavior: existence of incomplete contracts, mutual relations between consumers and sellers, construction of optimal motivational schemes, structure of rationing mechanism and income redistribution, inherent rational non-selfish behavior (altruism).

Simulation computer modeling

Construction of prognostic models of economic agents' behavior on the market in modern conditions is based on the use of the newest method of imitation modeling and conclusions of behavioral economy. Simulation modeling is computer-aided development of models and staging real-time experiments, where three main approaches are used:

1) system dynamics;

2) discrete-event modeling;

3) agent-based modeling.

At present the level approach in scientific research is widespread. In economic science, the concept of structural levels is used in relation to the scale, the size of the elements that make up the economic system. Traditionally micro-, meso- and macrolevels are distinguished, and they are widely used for constructing the structure of economic theory course in modern textbooks. Under the influence of globalization and informatization of economy in modern conditions, there is a complication, evolutional expansion and appearance of new analytical directions of research, from macroeconomics to megaeconomics and from microeconomics to nanoeconomics.

The term "nano"was coined in 1959 by physicist Richard Feynman in his report "There's plenty of room in that world". Nano (n) (from Greek nanos, "dwarf, dwarf,"or nano, an extreme version of micro) means one billionth of a whole. The prefix nano in the system of units (SI) means a multiplier of 10-9.

In the Western scientific literature the concept of "nanoeconomics"first appeared in the late twentieth century and was introduced into scientific turnover by the outstanding economist C. Arrow. In his article "Reflection on the essay published in 1987, the author understands by nanoeconomics the theory of economic behavior of individual economic agents in market and non-market conditions.

Conceptual approaches to the definition of nanoeconomics

Table 1 represents variety of conceptual approaches to definition of "nanoeconomics".

Table 1 – Nanoeconomics definition

Author	**Definition**
Foreign authors	
K. Arrow	Theory of economic behavior of individual economical agents in market and non-market conditions
G. Simons	Theory of phenomena research at a higher level of analysis (deeper level)
R. Lucas	Single-transaction theory of decision-making by market participants
Y. Kornai	Sub-micro-level theory of economic relations
Russian scientists	
G. Kleiner	The field of economic science, the objects of the study of which are internal processes at enterprises and organizations, mechanisms and factors of economic decision-making by individuals and teams (1999). The theory that describes behavior of partly irrational agent having creative talent and inclined not only to "algebra"calculations of the best result but also to extralogical search of economic truth (2004)

O.Inshakov	It is initial sphere and way of economy conducting at primary level of global economic system (GES) where by means of formation of social genome of subjects, processes and results of activity the production of things, properties and relations of artificial human world begins
G. Rossinskaya	The field of study of economic behavior of individual consumer
T. Lubimova	The new level of analysis of economic life of the individual, the importance of which increases in the model of multilevel economic system
V.Lyashenko, K.Pavlov	Branch of science studying nanoindustry, nanotechnology

On the basis of study of different approaches it is possible to formulate the following author's definition. From the political economy point of view, nanoeconomics is a set of economic relations of primary economic subjects – individual economic agents – in the process of reproduction: production, exchange, distribution and consumption – in order to satisfy needs.

Economic systems have the property of multilayers. A new analytical direction is the study of interaction of levels and their elements. Nanoeconomics, which describes motivation and behavior factors of an individual economic agent (individual), is the lowest (initial) level of studying economic relations, while megaeconomics is the highest level (see table 2).

At the nanoscale we study behavior of individual agents, motives and goals of their activities in the process of production, distribution, exchange and consumption. Nanoeconomic approach to the analysis of motives of individual behavior, strong enough internal bases for action, allows to define preferences, priorities, the most probable ways of behavior of economic subjects.

Table 2 – System of basic economic levels and hierarchy of their subject areas

	Level of research	**Object of research**	**Subject of research**
Higher	Mega-level	World	World Economy functioning
	Macro-level	Country	Functioning of national economy
Low	Meso-level	Industry, region	Functioning of industries
	Micro-level	Enterprise	Activity of firms
	Nsno-level	Man, individual	Economic behavior and activity of individual economic agents

The problem of economic behavior research is synthetic, it is at the intersection of interests of almost all spheres of scientific research dealing with human studies: philosophy, economics, sociology, psychology, etc. Due to specifics of the object of research, nanoeconomics is at the intersection of interests of neoclassical, institutional, evolutionary and behavioral theories. Progress in solving the actual problem of synthesis of these theories is at this level of research.

The field of behavioral and experimental economics employs diverse methodologies to understand human decision-making processes. Laboratory experiments using economic games, field studies in real-world settings, survey research, and neuroeconomic measurements provide complementary insights into how psychological, social and biological factors influence economic choices. These approaches reveal systematic deviations from classical rational models, demonstrating how fairness concerns, emotions and cognitive biases shape behavior. The semantic differential method offers a structured way to quantify subjective perceptions and attitudes, while simulation modeling helps predict complex economic interactions through system dynamics and agent-based approaches.

Modern economic analysis recognizes the importance of multi-level examination, from global megaeconomics down to nanoeconomics – the study of individual economic agents. Nanoeconomics focuses on the motivations, preferences and decision-making processes of individuals as primary economic units. This perspective integrates insights from various economic schools (neoclassical, institutional, behavioral) while drawing on interdisciplinary knowledge from psychology, sociology and neuroscience. The nano-level analysis provides fundamental understanding of how personal economic decisions aggregate to shape larger economic phenomena.

The synthesis of these research approaches has significantly expanded economic theory beyond traditional rational choice models. By incorporating real-world psychological and social complexities, behavioral and experimental economics provide more accurate frameworks for predicting economic behavior and designing effective policies. This evolution reflects economics' growing interdisciplinarity, combining quantitative methods with insights about human nature to better explain and influence economic phenomena at all levels – from individual choices to global market dynamics. The continued development of nano-level analysis promises to further bridge microeconomic behavior with macroeconomic outcomes.

Choice under risk and uncertainty. The Prospect theory by D. Kahneman and A. Tversky. Representational errors. Framing Effects. Peculiarities of decision-making under risk and uncertainty. Managing Economic Behavior Through Fear.

Sources: [3, 4, 9, 11, 12, 17]

2.1 D. Kahneman and A. Tversky's Theory of Perspectives

Prospect Theory is one of the key concepts in behavioral economics, developed by psychologist Daniel Kahneman and economist Amos Tversky in 1979. It explains how people actually make decisions under uncertainty, challenging the traditional economic model of rational choice. Unlike classical theory, which assumes that people objectively evaluate probabilities and maximize utility, Kahneman and Tversky showed that human decisions systematically deviate from rationality under the influence of psychological factors. The main idea of the theory is that people evaluate possible outcomes not in absolute terms, but relative to some reference point (usually the current situation). At the same time, they perceive gains and losses differently: a loss subjectively seems more significant than an equivalent gain. This phenomenon is called loss aversion. For example, the psychological pain of losing 1000 rubles is stronger than the pleasure of winning the same amount. In addition, people tend to overestimate low probabilities and underestimate medium and high ones. This is why many people buy lottery tickets (overestimating the chance of winning) or are afraid of rare but significant risks (for example, terrorist attacks).

Prospect theory also describes the certainty effect – the tendency to overestimate guaranteed results compared to probabilistic ones. For example, people are more likely to choose a guaranteed win of 100 rubles than a 20% chance of winning 500 rubles, although the mathematical expectation is the same. In situations with losses, on the contrary, they prefer risk: they agree to a 20% risk of losing 500 rubles, avoiding a guaranteed loss of 100 rubles. These patterns explain many irrational economic behaviors – from the reluctance to sell unprofitable shares to the tendency to overinsure.

The importance of prospect theory is difficult to overestimate: for its creation, Kahneman received the Nobel Prize in Economics in 2002 (Tversky did not live to see the award). It formed the basis of behavioral finance, influenced the design of government policies (such as automatic pension plans) and marketing strategies. Its main contribution was to demonstrate that economic decisions are determined not by calculations but by psychology, which requires more sophisticated models of behavioral prediction.

Figure 2.1 – Value function

The standard model of the information economy treats the time and effort required to solve problems as an expense. Behavioral researchers have studied in more detail how individuals make decisions in situations of increasing choice and complexity

Начало
Содержание
Страница 34 из 178
Назад
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of products. It was found that consumers use relatively simple "rules of thumb"or "heuristics,"that is, they ignore some possible choices because of the large amount of labor-intensive information. To optimize decision-making in such situations economic agents use heuristics, especially under time pressure when decisions should be made quickly. In many cases this is an effective way to achieve the optimal decision. However, these "rules"can also mislead consumers.

If consumers are able to evaluate and compare products, they often consider a limited number of variables, focusing mainly on price. In the case of complex products, important variables that can affect the overall cost of using the product may be ignored. Firms sometimes complicate the process by deliberately downplaying or even hiding features that affect price changes so as not to reduce demand for their products. This phenomenon is usually called "hidden attributes". For example, buyers of printers do not look for information about the price of ink, although these costs – a significant part of the cost of owning and operating copying equipment. Or they may make a reservation for a low-price hotel room and then discover relatively high rates for basic services that other establishments offer free of charge. It should be noted that in such cases, consumers who pay attention to hidden attributes in making decisions will benefit further if they can avoid paying inflated prices for hidden features. Economic agents are often faced with decisions that involve some degree of uncertainty. An obvious example is the purchase of insurance, where consumers pay a fixed sum to limit costs in case of car accident or the occurrence of serious health problems). There is also a large degree of uncertainty about the future when economic agents make borrowing, savings and investment decisions. Traditional economic models assume that consumers facing the problem of choice with uncertain outcome will assess possible outcomes depending on the probability of their occurrence and will make a choice with the highest expected profit that is they will maximize their expected utility. At the same time consumers evaluate risky decisions in the appropriate order.

Deviations in the behavior of economic agents are explained by the "prospect theory"of D. Kahneman and A. Tversky, which is related to decision making under conditions of risk.

The basis of the prospect theory is three inherent properties of the evaluation function of simple risk lotteries or chances:

a) Dependence on the baseline: the evaluation of the value of actions is determined relative to the baseline through change analysis;

b) loss avoidance: in the case of losses an individual evaluates the value of choice as negative, in the case of gains – as positive;

c) decreasing sensitivity: marginal value of both wins and losses decreases with the increase of their size. This property is a distinctive characteristic of both the valuation function and the probability weighting function.

This model is based on three cognitive principles of consumer choice:

- The estimation of possible consequences is relative to a neutral reference point, or adaptation level.

- The principle of desensitization works in assessing the di¤erence of wealth.

- The principle of loss aversion. Consumers are ready to undertake additional expenses in order to avoid big losses, but they are not ready to undertake such expenses in order to achieve big success. Losses are more experienced than gains.

Scientists, by analogy with perceptual adaptation, think that decision making will depend on the initial point (previous state, relative to which the situation is estimated), that is people will react differently to the same situations depending on whether they lose or gain something. The peculiarity of perspective theory is that reference point is very important moment when consumers estimate possible results. On this basis the following conclusions are made: firstly, the person is not capable to estimate future incomes in absolute terms, he/she estimates them in comparison with usual level of incomes or with the level that has developed; secondly at the same risk, people are more likely to maintain the financial level they have reached than to increase it.

On the basis of experimental data D. Kahneman and A. Tversky derived a value function, which was defined in values of deviation from the initial value. The curve is convex upward for winnings and concave downward for losses, which means inclination to risk aversion with winnings and inclination to risk with losses, and with losses the value function has a steeper slope than with winnings.

Let's look at a practical example again. According to prospect theory, the utility of gaining or losing 100 Belarusian rubles is assessed nonlinearly and asymmetrically. When a person receives 100 BYN, he perceives this amount not in isolation, but relative to his current financial situation, which serves as a reference point. The utility of a gain is assessed along a concave curve – the first 50 rubles bring more satisfaction than the next 50 rubles. However, the overall positive utility of gaining 100 rubles will be relatively small (see Figure 2.2).

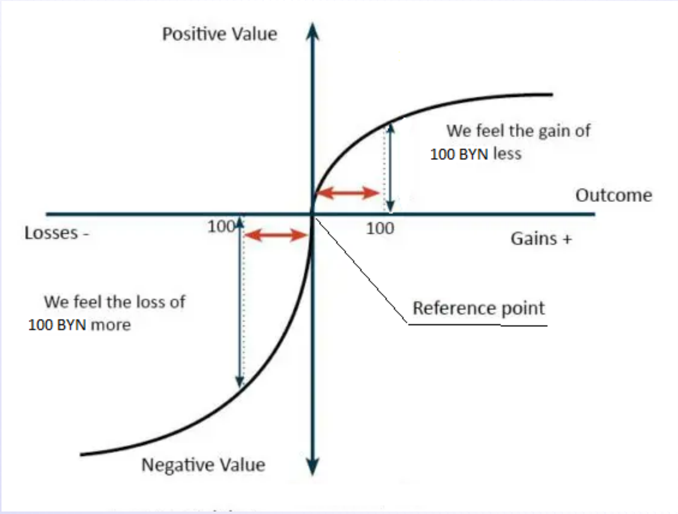

Figure 2.2 – The utility of gaining or losing 100 Belarusian rubles

The loss of the same 100 BYN is assessed completely differently. Prospect theory shows that people experience a significantly stronger negative reaction to losses than a positive reaction to equivalent gains. This phenomenon is known as the loss aversion effect. The utility of losing 100 rubles is assessed along a convex curve, with the steepness of the curve in the loss area being approximately twice as large as in the gain area. Thus, the psychological impact of losing 100 rubles will be approximately twice as strong as the joy of receiving the same amount (see Figure 2.2).

This asymmetry in evaluation leads to interesting behavioral effects. For example, a person is more likely to refuse a fair game with a 50% chance of winning 100 BYN and a 50% chance of losing 100 BYN, although the mathematical expectation of such a game is zero. Loss aversion makes people avoid even fair risks. Moreover, if a person is offered a choice between a guaranteed loss of 100 BYN and a risky prospect with a 50% chance of losing 200 BYN, many will choose the second option, demonstrating a propensity to take risks in the area of losses, which directly contradicts classical utility theory.

Such behavioral patterns identified by Kahneman and Tversky have important practical consequences. They explain why people may simultaneously buy lottery tickets (overestimating the small chances of winning big) and buy insurance (overly fearful of unlikely losses). In the context of Belarusian rubles, this means that people's economic decisions are often determined not by objective calculation, but by psychological factors of assessing benefits and losses.

2.2 Errors of representativeness. Framing Effects. Peculiarities of Decision-Making under Conditions of Risk and Uncertainty

Errors of representativeness. Representativeness bias is a common cognitive bias in which people tend to estimate the probability of events based on how well they match certain stereotypes or prototypes, rather than on objective statistical data. This concept was studied in detail by psychologists Daniel Kahneman and Amos Tversky as part of their work on prospect theory. The essence of the error is that a person overestimates the significance of individual characteristic features, ignoring the underlying statistical indicators and the actual prevalence of the phenomenon.

A classic example is the so-called "gambler's fallacy". When a coin toss comes up heads several times in a row, many people begin to believe that the next time it will come up tails, although objectively the probability remains 50/50. People mistakenly believe that small samples must reflect the properties of the general population, which leads to incorrect conclusions. Another example is judging a person's professional affiliation based on a short description. If a person is told that someone is shy, loves to read, and is neat, they are more likely to call him a librarian than a farmer, not taking into account that there are significantly more farmers in the population.

Such errors are especially dangerous in the financial and medical sectors. Investors may overestimate a company's prospects simply because its success story seems "typical"for successful enterprises, ignoring the general bankruptcy statistics. Doctors sometimes make rare diagnoses if the symptoms seem classic for a certain disease, not taking into account its actual prevalence. These errors are aggravated by the fact that people usually do not realize their susceptibility to such distortions, considering their judgments to be objective.

The psychological mechanisms underlying representativeness errors are associated with the work of the fast thinking system (in Kahneman's terminology). The brain strives for simplified, intuitive assessments, which often turn out to be erroneous when analyzing probabilistic events. Combating such errors is helped by recognizing their existence, learning statistical thinking, and consciously slowing down the decision-making process by analyzing all available data, not just those that seem most indicative. An equally important effect – the negative baiting effect – lies in the presentation of an additional choice only to fix the consumer's attention in order to impose on him the most profitable purchase for the seller.

In the first case consumer makes a choice according to the classical scheme "price – quality in the second case consumer usually chooses the case A out of all options, because he has an anti-bait (-A), with which he can compare his preferences.

In other words, additional information can distract consumers from more important factors, and it can have a negative impact on consumer choice and make them take less profitable decisions.

In his new work, D. Kahneman proposed the concept of "two-loop"psychology of decision making, which the author calls "System 1"(fast, intuitive, heuristic) and "System 2"(slow, rational and exact). The first works automatically and very quickly, requiring no special effort from the consumer, and does not produce a sense of deliberate control, the second – emphasizes the attention needed for conscious mental effort, requiring an expenditure of energy. Actions of the second system is connected, according to the scientist, with the subjective feeling of activity, choice and concentration. Instinctive use of the first system leads to the fact that many taken decisions turn out to be irrational, both from the point of view of formal logic and for consumer activity of an individual himself.

As a result, such phenomena as overoptimism, overconfidence, availability heuristics, hindsight bias turn out to be not just typical but mass phenomena both in economic practice and in everyday life.

Another behavioral trait related to uncertainty is overconfidence. Economic agents often believe that they tend to experience an outcome from certain actions that is better than the average expected outcome. For example, if it is said that 20% of customers have benefited from a particular product, they will tend to believe that they will definitely be in that group. Unreasonable confidence, which is a consequence of successful coincidence of predictable result, scientists call "illusion of validity".

Behavioral researchers emphasize that this is how consumers make choices. The relativity effect is closely related to the demonstration effect of consumption, in order to "keep up with the Joneses,"consumers often imitate neighbors, friends, and television stars.

As a result, consumers demand goods not only according to their functional qualities, but also their symbolic value. For a product with a symbolic value, the material component becomes less important, moral obsolescence occurs much faster than its physical wear and tear, therefore, the intensity of its consumption increases.

Scientists have found out that people more actively buy with electronic cards, it is easier to part with virtual money than with cash. Neuroeconomists say that credit cards parasitize on a dangerous defect in the human brain. This defect is linked to emotions, which tend to value immediate benefits (buying a new thing) disproportionately compared to future problems (high interest rates). Feelings are excited by the prospect of immediate rewards, and in this situation the person is unable to deal with the long-term financial consequences of the decision being made. The emotional brain blocks information about interest rates, debt repayment, or loan costs. As a result, areas of the brain, such as the Isle of Wight, do not respond to transactions that involve credit cards. Not feeling resistance, people succumb to impulses and make spontaneous purchases, making debts.

The widespread use of credit cards reveals the irrationality of human behavior. Consumers make a choice among several alternatives every day, and everyone is able, in principle, to estimate possible consequences of decisions they make. People are faced with constant trade-offs between consumption today and consumption in the future; moreover, their situation today depends a lot on choices made in the past. Standard economic models of intertemporal decision making assume that consumers choose the value of current and future consumption by discounting that is consistent between the two time periods, regardless of when the consumer makes estimates. Behavioral economics argues that consumers value the present more highly than other periods. Hence, they make short-sighted decisions about savings and credit. These consumers may, for example, take out a small loan today at a higher interest rate instead of a larger loan a year from now at a lower discount rate. Or conversely, open a deposit of 100k for one year versus 110k in two years, which means a lower discount rate for one year (9%). This phenomenon D. Laibson calls "hyperbolic discounting". Such discounting has serious consequences for consumers, which means that they may take various decisions today which they will regret in the future. Consumers most affected by hyperbolic discounting tend to have more debt than others. Probably they face the problems of self-management because of slowness and inertia, when the change of equilibrium requires efforts in the present to get more profits gradually in the future.

Framing Effects. Framing effects are a psychological phenomenon in which the wording or context in which information is presented significantly influences decisions, even when the substance of the alternatives remains the same. This cognitive bias has been extensively studied by Amos Tversky and Daniel Kahneman and has become an important part of behavioral economics. The idea is that people respond not to the objective content of information, but to the way that information is presented or "framed."A classic example of the framing effect is the difference in how people perceive statistics presented in terms of survival or mortality. When a medical procedure is described as having a "90% survival rate,"people are more likely to choose it than when the same statistic is presented as having a "10% mortality rate,"even though the two formulations describe the same situation. Such effects are regularly encountered in everyday life – from advertising offers ("95% fat-free"sounds more attractive than "5% fat") to political discourses, where the same law can be presented either as "tax cuts"or as "cuts in government spending".

In the financial sphere, framing effects are especially pronounced. Investors react differently to essentially identical risks depending on whether the emphasis is on the possibility of making a profit or avoiding a loss. For example, describing an investment as "having a 70% chance of making a profit"evokes a greater willingness to invest than the formulation "a 30% chance of losing money although the mathematical expectation in both cases is the same. Similarly, consumers are more likely to make a purchase when a discount is presented as "saving 20%"than when the same information is presented as "pay 80% of the price".

The mechanisms of framing effects are associated with the peculiarities of human perception and information processing. Our brains are evolutionarily wired to respond to immediate emotional cues elicited by different wordings, rather than to rationally analyze identical options. These effects are amplified in conditions of uncertainty or cognitive overload, when people rely especially on intuitive judgments. Being aware of framing effects is important for making better decisions, both at the individual level and when designing policies aimed at public welfare.

Studying the mechanisms of economic decision-making, D. Kahneman and A. Tversky conclude that psychological frames have a strong influence in practice. **The framing effect** suggests that when a person is faced with a choice between identical problems, but one of them is described in a positive way, while the other is described in a negative way, the decision may have an opposite character. People react to different signals and contexts. The effect of framing in a certain way can lead consumers to evaluate the choice from a certain point of reference and see the results of their choice in terms of "gain"or "loss. Providing choices with a default option can encourage consumers to choose that option because the "default"becomes the point of reference.

Recent research on retirement savings has shown how the "default"option affects retirement savings outcomes at all stages of the life cycle, including participation in savings plans, asset allocation, and distribution of pension savings. For example, joining the Russian co-financing program requires writing an application and going to the pension fund in person. This leads to the fact that many do not participate in this program, although the conditions are quite favorable, 50% per annum offers no bank.

A possible explanation of the framing effect is that framing changes the starting point (reference point) of decision making so that the ultimate benefit or loss is perceived differently and the risk vector changes. So in conditions of positive framing it is avoiding of risk, and in conditions of negative framing it is vice versa. Hence the conclusion that emotions play an important role in decision making mechanism. People react to different signals and contexts. Some experimental studies show that the presence of credit cards causes onomania, neurotic addiction in consumers, and is associated only with purchases.

Consumers are asking for help with impulse spending and developing self-control. Economists are trying to find ways to compensate for this behavior and are using the data from neuro-visualization to create methods and incentives that help people restrain irrational impulses and make more rational decisions. D. Ariely describes several methods of reducing credit card expenses: "ice glass"method (home remedy against impulse spending – freeze the card in a glass of water and then wait until it thaws); debtors' blogging on the Internet: automatic credit card balance. It is suggested that banks introduce credit cards of new type, with built-in self-control mechanism, limiting consumer impulses: in product category, in time period, in every store. Exceeding the limit is punished by penalties: own internal tax, long-term deposit, charitable contribution, sending a message to the spouse, etc. It is necessary to introduce so-called "governors"on expenses by analogy with a method of regulation of speed on roads that will help consumers to establish an independent credit limit in an optimum way.

Behavioral economics is based on the axiom of partial, but essential misunderstanding by individuals of the laws of market functioning, which is especially evident in the periods of crises. Individuals perceive only a small part of the total amount of information due to the complexity of the world of economics. Therefore, despite their desire, they cannot make optimal choices prescribed by theory. However, agents are ready to adjust their rules of conduct by "trial and error"method.

Peculiarities of decision-making under conditions of risk and uncertainty. Making decisions under risk and uncertainty is a complex cognitive process that is subject to systematic biases. In situations where the probabilities of outcomes (risk) are known, people show predictable deviations from rational choice. Research shows that people tend to overestimate unlikely events, such as winning the lottery, while simultaneously underestimating moderately likely risks, such as getting sick. This feature explains why people simultaneously buy lottery tickets and neglect insurance. Kahneman and Tversky's prospect theory explains such decisions by an asymmetric evaluation of losses and gains, where potential losses psychologically outweigh equivalent benefits.

Under uncertainty, when the probabilities of outcomes are unknown, the decision-making process becomes even more complex. People tend to rely on heuristics – simplified decision-making rules that often lead to systematic errors. For example, the availability of heuristics causes people to overestimate the probability of events that are easily recalled, such as plane crashes after big news. The anchoring effect occurs when the first piece of information received becomes a reference point for subsequent evaluations, even if it is irrelevant. In such circumstances, people often demonstrate conservative behavior, preferring familiar options despite potentially more profitable alternatives.

Of particular interest is the difference in reactions to risk and uncertainty in different contexts. Financial decisions in times of crisis, medical choices with limited information about a diagnosis, or strategic planning in business – all these situations require different approaches to assessing probabilities. Neuroeconomic research shows that different types of uncertainty activate different areas of the brain, which explains emotional reactions to ambiguous situations. Understanding these mechanisms allows us to develop more effective methods for supporting decision-making, from choice architecture in public policy to risk management systems in corporations.

The problem of risks is actively researched both in foreign and domestic scientific literature. M.Friedman and L.Savage (1948) were the first to study this problem in economic context, then this problem was deeply studied by D.Kahneman, A.Tversky and P.Slovik (1979) within the framework of behavioral and experimental economics. In 2002 the Nobel Prize in economics was awarded for the research in this field.

At each stage of development of the society there are different types of risks caused by uncertainty of a situation in this or that sphere of economic activity which is caused by spontaneity of processes or underestimation of growing contradictions in the society. The changes in Russia are happening so fast that the consumers are not yet aware of the inevitability of risk in their lives. The relevance of the study of consumer risks is increasing for several reasons:

- insufficient attention to the problem of consumer risks in the economic literature;

- sharp deformations in the structure of income, consumption and savings of the majority of the Russian population;

- ignoring the world trends in the establishment of social standards, regulation of labor relations;

- weak legal base of consumer rights protection and underdevelopment of consumer movement.

The aggravation of the problem of consumption risks in new conditions of informational economy requires the creation of an effective system of consumer risk management. In developing measures to reduce and prevent these risks it is important to consider their economic content.

The content of economic risks should be considered from general and specific points of view. There are different interpretations of risk, which reflect the complexity and versatility of the characterized phenomenon and reveal the essence of all kinds of risks, including consumer risks. In general terms, the risk is an economic category that expresses the relationship about achieving a certain degree of success (failure) in the implementation of its objectives of the subject of economic management, taking into account controllable and uncontrollable factors. Risk is often understood as the possibility of occurrence of any event. In the case of such event are possible three economic results: negative (loss, damage, loss), zero, positive (gain, chance, benefit). This probability can be taken into account by arranging expected impacts according to the probability of their occurrence.

Risk is characterized by unity of objective and subjective principles. On the one hand, it is generated by objective factors and exists regardless of the will and consciousness of people. On the other hand, the risk is associated with the choice of certain alternatives by a specific person, which bears the stamp of personality, psychological disposition, personal motives.

The emergence of risk is due to the probabilistic nature of many processes, unforeseen, random circumstances, multivariate economic relations into which the subjects of economic activity. The propensity to risk of subjects, in addition to their own characteristics, depends on the following factors:

- the actions of other business entities functioning in the external environment;

- presence of resources (it is believed that the more income a subject has, the less risk-sensitive he is and the bolder he is to risky situations);

- information (incomplete, constantly changing or unreliable information reduces readiness for risk).

Decisions are usually made by people in the absence of complete information and certainty. In this situation, there is a risk that the desired result will not be achieved.

The risk of consumer action is associated with the possibility of making dangerous decisions and the risk of the implementation of these decisions, because any decision is implemented in conditions, the first part of which can be considered certain (deterministic), the second – random, and the third – uncertain. Randomness and uncertainty of conditions and situations can lead to negative deviations and deviations, and the greater the proportion of random and uncertain conditions of decision-making, the higher the risk of taking and implementing dangerous decisions.

At different stages of human life certain risk situations prevail. Being of working age, the risk of job loss, deterioration of financial situation and decrease of social status due to economic reasons increases; when a person is pensionable the risks of hunger and poverty due to low income may appear. In the Russian economy with its high level of uncertainty it is quite difficult to predict the development of events in the nearest future, not to mention the perspective of predicting the trends of factor changes in the course of human life, which means that it is impossible to predict the expected results and the emergence of risk unambiguously.

It is especially important to consider the **factor of uncertainty** and the role of time in consumer decisions about savings. Savings are directed into the future. Every decision is based on future outcomes. This staying in time has two trivial consequences: the past is given irreversible, and the future is uncertain. Uncertainty must be distinguished from risk. At risk events are subject to formulated probability distribution and spectrum future events is known. With uncertainty, on the other hand, the spectrum of future events is not precisely known, so it is impossible to determine the probability of the outcome.

Under uncertainty, the distribution of probabilities of certain events is unknown. In this case the supposed net benefit is calculated on the basis of **pessimistic, optimistic and intermediate estimations.** The ranked number of variants and their acceptability are checked from the point of view of their sensitivity to changes of living conditions. Depending on individual attitudes to risk, people make decisions that they personally believe to be correct.

Depending on the different attitudes of consumers to risk, several types can be distinguished:

- *risk-takers* – individuals who are risk averse, taking risks easily (assuming that the winnings may be less than the initial payment);

- *risk-neutrals* – individuals who have a neutral attitude to risk (expecting to win);

- *riskphobes* – opponents of risk (investing an amount of money strictly less than the expected return).

Each subject of consumption, to a certain extent, is able to identify the risks to which it is exposed. However, not all risks can be managed independently. In many cases, the risk is taken when external circumstances require it. In this case, most agents do not expect to receive a big win, but only try to avoid losses. It often leads to the choice of slower, but more reliable variant of action.

Criterion "maxim"and "minimax"are used for analysis of economic agents decision making in risk situation. Criterion "maxim"supposes disinclination of a person, making decisions, to risk. This person will assume the worst possible outcome which should be taken into consideration for every variant. That variant is chosen, which brings the maximum benefit from minimally evaluated benefits for all projects. At criterion "minimax"the maximal losses of different variants are evaluated and the one which maximal losses are the lowest is chosen.

Risk is characterized by the following features:

- the uncertainty of the external environment;
- the need to choose a solution out of a number of alternatives;
- the possibility of obtaining an ambiguous result;
- the peculiarity of the behavior of subjects.

Risk as an economic category is understood as a counter-relevant multilevel relations between economic entities in conditions of uncertainty about the alternative choice of option decisions to achieve a satisfactory result, subject to the possible control of the risk situation. Depending on various factors at different levels, there are many kinds of risks, different in their impact on consumer and their consequences. There are economic, financial, social, natural and man-made, (geo)political and informational risks. The largest group consists of economic risks, which are related to the economic causes of their occurrence, they include the risk of loss of basic income, unforeseen costs, property, lost profits, etc.

Specific features of risks are caused by multifaceted human nature, the unity of biological, social, economic and consumer principles. Implementation of all aspects of human life activity is hindered by a variety of internal (heredity, abilities, financial situation) and external (natural, economic) factors, leading to losses or gains.

Management of economic behavior with the help of fears. Managing economic behavior with the help of insurance mechanisms is an important tool for reducing risks and stabilizing financial systems. Insurance works as a social institution that redistributes risks among a large number of participants, allowing to minimize potential losses for each individual or organization. The principle of insurance is based on the law of large numbers

– the more people participate in the insurance pool, the more accurately it is possible to predict the total amount of payments and distribute costs among all participants. This creates economic incentives for more rational behavior, since insured persons know that their potential losses will be compensated.

The psychological aspects of insurance are closely related to prospect theory and the concept of loss aversion. Most people are willing to pay relatively small insurance premiums to avoid even unlikely but significant financial losses. This is explained by the fact that the psychological value of guaranteed loss avoidance exceeds the cost of the insurance premium. However, behavioral studies show that people often overinsure themselves by purchasing unnecessary insurance, or, conversely, underestimate real risks by refusing the necessary insurance coverage. These distortions are associated with cognitive errors in assessing the probabilities and consequences of risk events.

Modern approaches to managing economic behavior through insurance take into account behavioral features of decision making. For example, the choice architecture (nudge approach) is used to increase insurance coverage – automatic inclusion in insurance programs with the possibility of refusal increases the level of protection compared to systems that require active signing of a contract. Another example is differentiated insurance rates that stimulate more careful behavior (discounts for careful drivers or non-smokers). The development of behavioral insurance is aimed at creating products and conditions that not only protect against risks, but also contribute to the formation of more responsible economic behavior among policyholders.

Fear is a real part of human life. Psychologists characterize fear as an emotion, a transient short-term excitement that loses its force as soon as the cause disappears or the stimulus is debunked. This emotion arises when something unpleasant is predicted, when the person perceives the situation as threatening to his or her calmness and security, and he or she cannot defend himself or herself, get rid of the threat, run away.

Persistent fear is considered pathological. However, according to the results of research by C.E. Izard, who conducted the survey of representatives of different countries, fear is the very emotion that people most of all do not want to experience. The experience of fear itself frightens people.

There are acquired activators of fear:

- the presence of something threatening;
- the absence of something that provides security;
- events that occur in an expected place and at an expected time;
- the context of the event;
- individual differences;
- suffering.

Fear increases when our way of life and activities change against our wishes. Fear arises when we find ourselves in what we think is an unsolvable situation. Anything new, unknown, or new that happens for the first time is also accompanied by fear.

Replacement of biological fears on the social and economic occurs quite gradually, but irreversibly. For example, fear to be labeled as a "redneck "bumpkin". This label appeared not so long ago in our society, but it has already taken a stable form of a non-formal institution, forming a special line of behavior, including consumer behavior. The result is the extinction of the village, the lack of prestige of the rural way of life, the rise in price of food, the beginning of pro-village crisis. And such fears appear more and more in the process of development of society, while the number of biological fears remains almost unchanged.

It is necessary to distinguish between the following kinds of fears:

- objectively determined fear with a source that is difficult to eliminate – increasing tendencies of deterioration of the economic situation that are not parried by the subject, due to which the economic situation threatens to develop into a critical, crisis, irreversible for the subject. If in such a situation the person doesn't find a way out and no one is able to protect him/her from the threat, the fear becomes panic and hopeless and the subject relies on chance (economic crisis, retirement age, loss of health, getting sick with HIV or cancer);

- transient fear with a treatable threat – for suppression it is required to carry out program actions, measures against the source of threat, or to patiently wait for its self-elimination (loss of work, reduction of income, temporary disability, etc.)

- inspired, contrived, artificially instilled in the subject – does not contain a real threat, the appearance of which is specially created to mislead the subject and induce him to react as needed for the persons who generated the idea of the existence of the threat (anti-bacterial soap, dietary supplements, metal doors, disposable packaging, etc.).

If the threat cannot be eliminated, we have to resort to the psychology of inevitability, tolerance, the inevitability of fate, and strive to soften the possible blow to the extent possible.

If the threat is temporary, eliminable, it is necessary to take measures, to mobilize forces and means to confront the threat and its sources, and to strive to minimize the damage.

As for fictional threats, it is necessary to expose them and dispel groundless fear, to think about how to behave in relation to the spreader or sower of fears.

Classification of local fears:

- *Fear of the boss.* Fear of the boss, chief, commander, teacher, etc. is a typical type of social fear. In our society this type of fear takes monstrously perverted forms, when since childhood we become afraid not only of the above categories of bosses, but even the salesmen behind the counter or consultants in the salesroom, when their critical glance or gesture makes us feel small and helpless, buying what you have been told.

- *Fear of responsibility.* It can take the form of fear of responsibility for the entrusted business, organization, sports team, family, subordinates. Medical research shows that fear of responsibility, as a type of social fear, has a significant impact on the development of cardiovascular disease. Fear of responsibility has almost no biological roots, and is caused almost exclusively by social mechanisms.

Fears of success and failure are another social fear.

1. *Fear of failure.* This social fear is associated with the fear of failing, whether in

career, business, schooling, or personal life. The group of social fears of failure, as a separate type, includes fear of undertaking. Varieties of social fear of failure include:

- *Fear of rejection,* because of which some people do not ask other people to help them, and they sometimes have no idea about the desires of these "shy"people, although they could do something good for them.

- *Fear of poverty,* because of which people save money, denying themselves everything, and when they decide to spend it, the time is already lost.

- *Fear of not being able to pay their debts,* because of which people do not take credit, missing out on profitable opportunities, while accumulated savings are "eaten away"by inflation.

2. *Fear of Success.* This seemingly unusual social fear is characteristic of people who are not quite sure of themselves, who have reconciled themselves to their situation, and who deep down fear that if they succeed they will have to take on new responsibilities, make additional efforts, and hold on to the positions they have won. It would seem that this fear is the opposite of the fear of failure, but at the heart of this fear is also a sense of insecurity. Success in that case seems dangerous to man, and he begins to avoid it, condemning himself to a dismal existence.

3. *Fear of solitude.* Social fear of solitude is especially acute for people who find it psychologically difficult to be alone. This also includes fear of losing a loved one. Some types of fear that are complex also include elements of this experience. For example, fear of losing one's job is caused, on the one hand, by insecurity, and on the other hand, by fear for one's own financial situation and, on the other hand, by fear of loss of social contacts, i.e. one of the varieties of fear of solitude.

4. *Fear of close social contacts.* An opposite form of social anxiety is fear of having too close contacts with co-workers, neighbors, etc. Some people, under the influence of impulses aimed at increasing independence, will experience fear of openness and dedication. The life of such people is associated with an increased desire for independence, which leads to their isolation from others.

5. *Fear of evaluations.* Fear of evaluations can take two opposite forms: fear of negative evaluations by others, on the one hand, and fear of inattention by others, on the other. Close to this fear is the fear of being judged by others, where the focus of a person's consciousness is not the final result of his or her activity, but the reaction of the immediate social environment. In this case, according to the person, an attempt to do something new, which turned out to be wrong, will be met with condemnation. For some people, fear of looking worse than others because of old or unfashionable clothes, or lack of jewelry (for girls) is characteristic.

6. *Fear of inattention from other people.* This type of fear is typical of demonstrative, hysterical people who get upset if they are not noticed. They do not care what the occasion is, as long as they are talked about, looked at, admired or, at least, hated.

According to J. Elster, it is possible to distinguish at least four forms of coercion to economic activity by means of fear.

The first is **extra-economic coercion,** which expresses the relations of direct domination and subordination, the personal dependence of man: on other people, administrative, political or military bodies. Under conditions of non-economic coercion a person is driven by fear: of possible physical violence (up to extermination), of deprivation of legal, civil or social status (to be beaten, robbed, killed in a terrorist attack), to be jailed, fired from work, to be sexually abused.

The second form is **economic coercion,** which is understood as a one-sided dependence of a person on the material conditions of his existence. When the minimum of basic needs is not provided, a person has virtually no choice, he is again guided by fear (of hunger, poverty, degradation, unemployment). And it is not only physiological, but also social minimum determined by belonging to any society or specific groups. To "adequately support"oneself and one's family, to be "not worse than others"– there are many coercive elements in it.

The third form is the **technological coercion,** which expresses unilateral man's dependence on the conditions of labor and production, which is caused by his narrow professional qualifications, "attachment"to the workplace. A vivid example is "mono-factory"cities, where the most likely outcome for the majority of adult population is to work at a single enterprise. Leaving one's place becomes more and more difficult over the years, and there is nowhere to go. People become appendages of a specific technological process.

The fourth form involves a more subtle way of influencing – **ideological coercion.** The latter arises as a product of manipulation of personal interest: the fear of God's punishment, the loss of vital reference points, the breaking of social ties with the reference group are used. The already conditional distinction between negative and positive motivations is virtually erased here. This also includes underestimation of the harm of alcohol and the level of mortality from it. But the ideology of our state, where alcohol production is a state monopoly and an important source of taxes and profits, does not allow public opinion to develop in a different way.

Thus, trading with fears is the most probable tendency of development of relations with consumers in the nearest future.

3 BEHAVIORAL THEORY OF PERSONALITY

The multifunctional role of personality in economics. Psychological characteristics of economic agents. Creativity and innovativeness of consumers. Emotional intelligence. Theory of generations.

Sources: [3, 4, 5, 6, 16, 17]

3.1 The multifunctional role of personality in economics. Psychological characteristics of economic agents

The multifunctional role of the individual in the economy reflects the complex relationship between individual psychological characteristics and economic processes. Each economic agent simultaneously plays several roles: consumer, employee, investor, and member of society. These roles mutually influence each other, forming unique models of economic behavior. For example, consumer preferences are determined not only by rational calculations, but also by value orientations, social norms, and emotional states. As an employee, a person is guided not only by the size of his or her salary, but also by the need for self-realization, a comfortable working atmosphere, and social recognition. Such versatility makes economic behavior difficult to predict and manage.

The psychological characteristics of economic agents play a key role in decision-making. Cognitive limitations, such as bounded rationality and a tendency toward heuristics, force people to simplify complex economic problems. Emotional factors, including fear of loss and excessive optimism, often outweigh rational arguments when choosing financial strategies. Socio-psychological mechanisms, such as herd behavior or the desire for social justice, explain mass economic phenomena – from stock market bubbles to consumer boycotts. At the same time, individual differences in the level of financial literacy, risk propensity and time preferences create a significant variety of economic strategies even in the same external conditions.

Modern economic science increasingly takes these psychological aspects into account, which is reflected in the development of behavioral economics and neuroeconomics. Understanding the multifunctional role of the individual allows us to create more effective economic institutions, financial products and social programs. For example, pension systems that take into account people's tendency to procrastination, or credit products adapted to different types of financial behavior. These approaches recognize that an economic agent is not just a rational maximizer of utility, but a complex system of psychological characteristics, social connections and cognitive processes that together determine economic dynamics at the micro and macro levels.

In modern economy based on knowledge, the role of person as the carrier and creator of new knowledge increases, which creates prerequisites for individual socio-economic leadership. The individual goes through several stages of transformation on his way to leadership. M. Sh. Magomed-Eminov singles out a special type – endotransformation – a form of personality transformation, when an individual transforms from one integrity to another, reaching a higher level of maturity, completeness of self-realization and expanding experience. Nanolevel of the individual economic agent assumes a variety of its economic behavior and provides a basis for understanding its role in the new economy.

Individual as a consumer. The main estimation of firm's activity is given by consumer. In modern conditions the character of consumption is changing: it is becoming diversified, individualized, situational. According to D. Tapscott, one of the signs of the new electronic-digital society is the transformation of the relationship "producer-consumer the boundaries between production and consumption are disappearing. The process of customization is observed, when the producers are forced to create goods, corresponding to the requirements of individual consumers. In the new network society consumers are involved in the production process, i.e. their knowledge, information and considerations are used in determining the technical characteristics of products. In the information superhighway every consumer becomes a manufacturer at the same time, when he/she creates and sends a message, runs the virtual car, creates the desired design on the computer screen. Consumers' ideas, information and technology become part of products, the content of knowledge in goods and services increases. Consumers of information and technology themselves become producers, begin to play a dominant role.

The individual as a saver, investor. Study of financial behavior of an individual economic agent at the nanolevel is based on the developments of cognitive neuroscience, neuroeconomics, and behavioral economics (J. Akerlof, D. Kahneman, A. Tversky, and W. Smith). In the course of psychological experiments scientists came to the conclusion about the phenomenon of "false memory"that can stand in the way of objective perception of reality and influence on individual decision-making in the situation of uncertainty, especially in financial markets. Realistic modeling of people behavior requires deep study of motives and factors of behavior of savers and investors, their risk propensity, choice of financial strategies.

The individual as the owner of a micro-enterprise. Nanocorporations – microbusinesses, according to D. Pink, remain "awfully small their size reflects personal preferences of their owners and is the basis of a competitive strategy. In the information economy the means of production are available to everyone, are cheap, can be kept at home and maintained by one person. There is a tendency for businesses to migrate from work to home. The reason for this is digital technology, which allows you to reduce costs to almost nothing, lick-visible barriers to enter the market. As K. Meyer notes, we are to move from monolithic, closed by own boundaries organizations looking down from above, to the network of atomic units, which are in a constant process of forming new relations and creating market value from the bottom up, which changes the idea of resources management.

The individual as a business unit. Nanoeconomics is defined as workplace economics. The basis of this approach is economic genetics and evolutionary economics, which allows creating and applying nanotechnology of operational management, significantly increasing labor productivity, efficiency and competitiveness of enterprises on a global scale. P. Drucker singles out a special category – "mental labor workers who have high intellectual and creative potential. Consequently it is important to make maximum productive the specific skills and knowledge of each separate worker. In his opinion, the ability of an organization to absorb knowledge and quickly put it into circulation is the highest competitive advantage. The role of each employee as a business unit is important in this process.

The individual as a free agent. An important feature of the new economy is free agents, who are both employers and employees. This is the largest employment sector in the United States. D. Pink identifies three main categories of the self-employed population – "soloists"or freelancers, temporary workers and micro-entrepreneurs. Freelancers work alone, moving from one project to another. Temporary workers are people who turn into free agents against their will. One of the reasons for going into free agents become insecure and unstable position in the corporate environment.

The individual as a manager. The use of organizational management principles in individual career building, personal time management, planning of life processes forms a new direction of research – nanomanagement. According to T. Lyubimova personality and career management is based on totally opposite realities: 1) the majority of people will outlive the organizations in which they work; 2) employees of mental labor are mobile and easily change the place of work. Such approach is conditioned by individual's aspiration for high standards of life quality, care of his/her self-realization, health, welfare, and development of his/her own personality. This is promoted by modern technologies and conditions of information economy. We can observe the evolution of possibilities for each individual and the evolution of opportunities for satisfaction of his/her needs.

An individual as a creator and disseminator of ideas and innovations. Nanoeconomic analysis of innovative behavior is directed to individual experience of the subject and uniqueness of each person as a creator of new ideas. The key point of innovative process is a person going beyond rational thinking, a departure from traditional schemes and methods of processing information. The creation of new ideas and innovations is based on the impulses of irrational, intuitive and creative in man. M.

West believes that the innovator – a person with a fairly high level of creativity and innovativeness, which can not only produce new original ideas, but also apply them in practice. Diffusion, or diffusion of innovations, according to E. Rogers, is the process by which new ideas, technologies and suggestions are spread between the members of the social system (network) through communication channels for a certain period of time. Social ties are determined by the degree of trust in other subjects and institutions that play a key role in human life. Cooperation of people in network becomes a part of international depository of knowledge.

Individual as a personality. Modern technologies allow creating a space-time model for personal development of the individual, based on a system of new values. One of the ideas – "horizontal career"– forms the vector of comprehension of human life space, the idea of infinity of professional and personal self-improvement. The spatial vector of individual's self-development is supplemented by another qualitative level of value – "management from any point". This management principle is comparable to the phenomenon of "quantum transition when quantum system of an atom jumps from one energy-state to another, i.e. quantitative practical application of acquired skills goes to a different quality of management of own resources. Mastering and application of these technologies provides an opportunity of "quantum"managerial transition in the vertical hierarchy, helps to move up the career ladder, creates a two-dimensional horizontal and vertical space of leadership qualities development. Realization of the Big Goal value (the goal that is beyond one's own life) forms the time vector of personal development. According to D.V. Udalov, the big goal set structures the time of life for the activity connected with goal achievement and for the time wasted "in vain". Temporal vector of technology to achieve the Great Goal is directed to the future, allows an individual to maintain its position in the created business, business, technology.

Thus, individual economic agents in the new economy are fundamentally changing the relationship on the markets of goods and services, labor and capital. Any effective activity depends on each individual person, on his/her contribution, behavior, attitude to the task, his/her stimulus and motivation, sources of information. The speed of changes increases with the use of intelligent software and the development of information channels, which requires an individual at any level of economic analysis, proactive response to changing opportunities, as well as the development of strategic decisions with the use of those tools that are available exactly at nanoeconomic level.

Psychological characteristics of economic agents. The personality of the economic agent and its psychological peculiarities play an important role in the process of choice. Nano-economic peculiarities are important, first, from the position of comprehension, perception, evaluation and processing of information for making economic decisions, and second, from the position of the influence of these processes on the economic behavior of individual agents.

In particular, G. Kleiner cites the following nanoeconomic characteristics of Russian individuals:

- Binarity of thinking and mental evolution. Creates a hindrance in the comprehension and formulation of the goal of choice.

- Relationship binarity: stable endogenous goal-seeking is replaced by unstable exogenous goal-seeking.

- The personal character of relations. Deforms the system of trans-actional contracting.

- Logocentric thinking of the individual: "when a word means more than a thought". Subjective interpretation and estimation of information depends on its delivery form.

- Irrationality of expectations and behavior. Russians have exaggerated expectations, that deforms the field of possibilities and doesn't allow to estimate consequences correctly. Rational behavior is more predictable and applies to many decisions, the irrational has an individual character and is difficult to transfer to the behavior of others. The prevalence of locally irrational decisions over regularly rational ones corresponds to the Russian mentality.

- Contract and postcontract behavior. There is a special attitude to contracts which regulate the behavior of market participants and which are not perceived by individuals as obligations and are not a guide for action. On the whole, a low level of contractual discipline and formal attitude to the law are typical for the Russians.

- Bargaining peculiarities and disinclination to compromise. Non-compromise way of decision making is often manifested in situations where there are opposing interests, which requires interference of the third party for their harmonization.

- Impulsive character of the activity. On the one hand, it makes it difficult to maintain high quality of production for a long time, on the other hand, this mental peculiarity is reflected in impulsiveness of purchases, especially expensive goods.

- The prevalence of exogenous values over endogenous values in the value field of the individual.

Human needs, motivation, the nature of work and workload are transformed in the modern world, the cost of social resources increases. Thinking abilities are shifting to a higher content level: data – information – knowledge. There appears a new way of life associated with negative moments: cognitive dissonance, psychological deviations, motivational shifts, apassionarity, etc. Psychological attitudes of economic behavior have inertia, it is impossible to change them quickly, asymmetry of behavior is observed – bad things grow quickly, while the cultural attitudes are instilled slowly.

Modern consumer in the new economy has the following qualitative characteristics, belonging to an individual agent:

1. Intellectuality and trainability are shown in consumption of more and more complicated goods.

2. Innovativeness and creativity of economic agents.

3. Mobility and ability to network.

4. Consumer's freedom of choice and sovereignty, which is being exercised to a greater extent.

Modern cars, home appliances, personal computers as high-tech products require consumers to have new knowledge, specific skills and complex practical abilities. In other words, consumer uses goods, services, technology, saturated with information, intellect and knowledge. The very process of consumption becomes highly qualified. Russian consumers are more demanding, they know a lot about the product and have high expectations. The growth of financial literacy makes consumers more discriminating. Increase in quantity and complexity of information, alignment of consumer characteristics of goods and services, growth of income and well-being reduce the importance of price in comparison with the cost of their choice and search, and decrease the desire of consumers to follow the principle of maximization.

3.2 Creativity and innovativeness of consumers. Emotional intelligence. The theory of generations

Consumer creativity and innovativeness are important aspects of modern economic behavior that significantly affect market dynamics and the development of new products. Creative consumers do not simply passively use products and services, but actively adapt them to their needs, combine them in unexpected ways, and even modify them beyond the intended use by the manufacturer. Such behavior often leads to the emergence of completely new ways of using products, which can open up additional market niches or even create new product categories. For example, the use of baking soda not only in cooking but also for cleaning or skin care was initially initiated by consumer creativity.

Consumer innovativeness is manifested in their willingness to be the first to try new products and technologies, as well as in the ability to generate their own solutions to meet unrealized needs. Psychological studies show that such consumers have certain personality characteristics: high tolerance for uncertainty, openness to new experiences, and developed cognitive abilities for associative thinking. At the same time, innovative consumer behavior is not limited to technology products – it is equally important in the service sector, where users often suggest improvements based on their personal interaction experience. A striking example is the development of many features in mobile applications that were initially suggested by users themselves through feedback and suggestions.

The economic importance of consumer creativity and innovation cannot be overestimated. Manufacturers are increasingly involving consumers in the process of developing new products through crowdsourcing platforms and open innovation systems. Such collaboration allows companies to reduce the risks associated with bringing new products to market and increases the chances of commercial success. On the other hand, creative consumers often become opinion leaders in their social circles, accelerating the spread of innovations. In the digital age, this process has received additional acceleration thanks to social networks, where consumers not only share their findings, but also collectively improve ideas, creating a powerful driver of market change.

Creativity and innovativeness are qualitatively new characteristics of modern consumers. In economic psychology the research of innovativeness as a personal characteristic is most intensively developed in three directions:

- in the context of the use of information and communication technologies;
- in the study of consumer psychology of goods and services;
- management of organizations and organizational psychology.

The typology of consumers can be conducted on the basis of economical and pragmatic approach that focuses on the socio-economic, pragmatic, technological and applied aspects of creativity. According to psycho-economic approach creativity acts in indissoluble connection of intra-personal and situational external factors that determine maximization of the received economic effect from creative decisions of consumers. D. Throsby defines creativity as rational and irrational process of decision making. The most known theory of consumption of T. Lubart and R. Sternberg, where creativity is shown in desire to buy ideas "cheaply"and to sell them "more expensively". Purchase of ideas means search of those decisions and offers which are yet unknown or unpopular, but have big potential, in some sense it is possible to name "venture capital investment"in image. The consumer creativity is manifested as a special form of self-expression associated with the tendency of personal development and activity in the process of consumption. In some way it is similar to demonstrative consumption theory. However the essential difference is that the effect of demonstrative consumption is connected with stressing of social status through high price of goods, whereas the effect of creativity is connected with stressing of status through creative approach, using things in unusual way in new combination. Creativity is realized thanks to the interrelation of the following cognitive abilities of a person: intellect, knowledge, thinking style, personality, motivation and environment.

The main factors determining consumer creativity are:

- Synthetic ability – a new perspective on goods and services, overcoming stereotypes of everyday consciousness;

- Analytical ability – ability to distinguish new perspective ideas for development;
- Contextual-practical ability – convincing others in value and perspective of the chosen goods or services.

In the framework of psycho-economic model constructed by D. According to M. Ranco and R. Beneson the importance of appropriate use of new ideas, products and goods is recognized; creativity is viewed from the position of investment correlation, risk and received profit. According to M. Chiksentmihai's system model the level of economic development of the country has a significant influence on creativity development. Innovations and creativity are in direct dependence on each other. The following regularity is revealed: the higher the degree of innovation demand, the higher is the level of creativity in a certain sphere. Consequently, for creativity to grow it is necessary to introduce innovations actively, and vice versa. Creativity is moving into the space of consumption. New creative consumption practices that stimulate the development of production are being formed.

A number of interdisciplinary studies are devoted to the study of "consumer innovativeness,"related to the orientation of a person to consume new goods and services. Two main types are distinguished:

- "global innovativeness or innate innovativeness, which is shown in the generalized attitude of the subject to the perception and acceptance of new brands and goods;
- Specific innovativeness which is shown in different spheres of life and consumer activity of the person.

Economic analysis of innovative behavior refers to subject's individual experience of consumption, freedom of different interpretations and uniqueness of every person as a creator of new ideas. The key point of innovative process is a man's going beyond rational thinking, a departure from traditional schemes and methods of processing information. The creation of new ideas and innovations is based on the impulses of the irrational, intuitive and creative in man. Thus, M. West believes that the innovator is a person with a fairly high level of creativity and innovativeness, which can not only produce new original ideas, but also apply them in practice. Social communications are defined by a degree of trust to other subjects and the institutes which play a key role in human activity. In informational economics the consumer becomes a creator and distributor of ideas and innovations thanks to networks.

Modern scientific literature widely represents theoretical and empirical researches of creativity and innovativeness, which can be used at ranking of consumers. Typology of consumers taking into account innovativeness is based on the model of I. Harrison and J. Horn, which divides participants of innovative process:

- innovators who actively use new products, ideas and technologies;
- Imitators, adhering to the fashionable tendencies, traditions and opinions of the majority;
- Repeaters, who are inclined to return to their choices more than once.

Western literature studies the peculiarities of family purchasing innovativeness as for each member of the household separately as well as within the family system, in particular along the husband-wife line (husband – wife innovativeness).

The most known is the theory of diffusions of innovations by E. Rogers. The author understands innovation as an object, idea or action perceived by the consumer as new. Diffusion, or diffusion, of innovations, in his theory, is the process by which new ideas, technologies and offers are distributed between the members of the social system (network) through communicative channels for a certain period of time. In the context of studying the diffusion of innovations, the structures of social networks, group norms and models of decision-making within them are investigated.

The time factor has great importance in the process of diffusion of innovations, which manifests itself in the following forms:

1. The stage of decision-making regarding innovations:

- The receipt by the consumer of initial knowledge about the innovation;
- formation of his attitude towards it;
- Generation of the decision to accept or reject innovation;

- Creation of the model of its realization and implementation;
- confirmation of the decision concerning the innovation.

2. The rate of assimilation of innovation is a relative speed with which it is accepted by members of a social network. The average rate corresponds to the number of consumers included in a network, who have assimilated the innovation during a certain period of time, and to the greatest extent depends on the following characteristics:

- *relative advantage* – level of preference of innovation in comparison with those goods and services, which are replaced (it is connected with the factors of prestige, convenience, satisfaction, etc.);
- *compatibility* – the level of compliance with existing values, past experience, as well as the needs of the consumer;
- *complexity* – the level of difficulty of perception, assimilation and practical use of innovation;
- *evaluability* – the ability to analyze, assess the effectiveness and prospects of innovation;
- *observability* – the degree of accessibility of the results for postponed people.

Thus, innovativeness of consumer is determined by the speed of adoption and assimilation of innovation compared to other participants of social network.

Buying a new product, the consumer supports innovation. If he is not interested in innovation, denying a new product in demand, he does not recognize the direction of innovation, which is fraught with serious problems for business, up to bankruptcy. From here arises the hypothesis that innovativeness and creativity of the consumer is not less important, than innovativeness of the businessman. New economy with the necessity of formation of consumers of innovations, which can become modern consumers by activization of knowledge-intensive consumption on the basis of accelerated development of traditional sectors of consumer sector.

Emotional intelligence. The term "emotional intelligence"(from English emotional intelligence – EI) was introduced in 1990 by scientists P. Salovey and J. Mayer. The authors refer this category to a group of mental abilities that allow you to recognize and understand your own emotions and the emotions of others (ability model).

Emotional intelligence is a person's ability to recognize, understand, and manage their own emotions and the emotions of others. Unlike traditional intelligence, which is measured by IQ and reflects cognitive abilities, emotional intelligence is associated with the ability to interact effectively in a social environment, resolve conflicts, and adapt to changing conditions. This concept, first developed in detail by psychologists Peter Salovey and John Mayer and then popularized by Daniel Goleman, includes five key components: self-awareness, self-regulation, motivation, empathy, and social skills. Developed emotional intelligence allows a person not only to better understand their emotional reactions, but also to anticipate the consequences of their actions on others.

In the professional sphere, emotional intelligence plays a crucial role, especially in professions related to management, negotiations, and teamwork. Research shows that leaders with a high level of emotional intelligence create a more productive and harmonious work environment, which ultimately has a positive effect on the performance of the entire organization. They are able to motivate employees, resolve conflicts constructively, and effectively manage stressful situations. In sales and customer service, emotional intelligence helps to establish trusting relationships, accurately identify customer needs, and find an individual approach to each. Interestingly, many companies now evaluate not only the professional skills of candidates when selecting personnel, but also their level of emotional intelligence.

In everyday life, emotional intelligence helps build better interpersonal relationships and helps cope with life's difficulties. People with developed emotional intelligence better understand their true needs, are able to express feelings in a constructive way, and are less prone to impulsive decisions. They demonstrate higher stress resistance and the ability to adapt to change. Developing emotional intelligence is especially important in raising children, as it helps them learn to regulate their emotions, develop empathy, and build healthy relationships with peers. Modern educational programs increasingly include elements of emotional intelligence development, recognizing its importance for successful socialization and mental well-being.

The model of abilities includes the following components:

- *perception and expression of emotions;*
- *increasing the effectiveness of thinking activity with the help of emotions;*
- *understanding of own and other people's emotions;*
- *management of emotions.*

The concept of emotional intelligence has not yet been established in the scientific literature. In general, emotional intelligence is understood as the ability of the individual to understand the emotional sphere and manage their emotions in order to effectively solve assigned tasks.

The structure of emotional intelligence includes five main components: sociability, emotionality, self-control, well-being, and auxiliary elements, divided into three levels (low, medium, and high).

The main characteristics of emotional intelligence are:

- self-identification – the ability to assess oneself, the study of one's ego;
- self-control – the ability to control and manage one's emotions to achieve goals;
- social skills – the ability to interact with others emotionally;
- empathy – the ability to recognize the emotions of others and «put oneself in their shoes»;
- motivation – the ability to use one's own emotions and preferences to motivate activities.

It is believed that people with high emotional intelligence are more optimistic and easier to adapt to any team and any activity. However, several studies have not confirmed such a relationship. The psychologist K. Petrides observed that a high level of EI helps people working in the "man – man"segment to increase efficiency and, conversely, working with technology, numbers, calculations – reduces productivity. As G. Salvendi found out, high levels of motivation lead to mental overload and decrease labor productivity. Thus, there is an optimal level of motivation for each task and each person, which gives the maximum productivity.

The theory of generations. The theory of generations developed in 1991 by American scientists economist N. Hove and historian W. Strauss is very important for the study of economic behavior. The basis of this theory is the category of value, which is formed under the influence of socio-economic and cultural-historical conditions. It is considered that the system of values is formed in a person approximately up to 12-14 years old and follows him throughout his life, putting imprints on his consumer preferences. Depending on living conditions in childhood, a person's idea of happiness is formed, which is realized in consumer preferences. It is attitude to happiness that gives understanding of how people of different generations differ from each other.

Generational theory in behavioral economics examines how the historical, social, and technological conditions of the formation of different age groups influence their economic behavior, financial decisions, and attitudes toward consumption. Each generation develops in a unique context — economic crises, technological breakthroughs, or cultural transformations — which forms stable patterns of thinking and value orientations. For example, representatives of the baby boomer generation, who grew up in the post-war period of economic growth, demonstrate a greater commitment to traditional financial institutions and a tendency to accumulate, while millennials, who formed in the era of digitalization and economic instability, are more likely to trust fintech services and value flexibility over stability. These differences are explained not only by age, but also by deeply learned patterns of response to economic incentives in youth.

Behavioral economists highlight key features of generational cohorts that influence the market. Generation X, which experienced the recessions of the 1980s and 1990s, is skeptical about long-term financial commitments and diversifies risk. Millennials, who lived through the 2008 crisis, tend to postpone large purchases (such as housing), preferring experiences over ownership, and their decisions are heavily influenced by environmental and ethical considerations. Generation Z, coming of age in the era of social media and the gig economy, demonstrates unprecedented adaptability to innovation, but also heightened anxiety about the financial future. Such differences pose challenges to traditional economic models based on universal assumptions about rationality and require that generational values be taken into account when designing products, pension systems, or marketing strategies.

Practical applications of generational theory help explain macroeconomic trends, from the decline in demand for cars among young people to the rise of sustainable investments. For example, millennials' reluctance to invest in the stock market, despite the long-term benefits, is linked to their "financial trauma" after the 2008 crisis, when they watched their older relatives' savings collapse. At the same time, digital platforms are successfully exploiting the characteristics of Generation Z, offering microinvestments with gamified elements, which turns the boring process of saving into a socially meaningful experience. Understanding these patterns allows companies and regulators to develop more targeted interventions: from financial literacy programs that take into account generational differences in risk perception, to the design of pension systems that motivate younger cohorts through mobile technology and transparency. In this way, generational theory enriches behavioral economics by showing how collective historical experience shapes economic behavior for decades to come.

4 BEHAVIORAL THEORY OF THE FIRM

The firm in behavioral economic theory. Limited rationality in economic decision-making. The model of variable rationality. The firm as a coalition of participants. The development of the behavioral theory of the firm. The social-evolutionary theory of spiral dynamics. The implementation of behavioral theory of the firm in the new economy. The behavioral basis of interaction in the virtual environment of the Internet.

Sources: [3, 8, 12, 17]

4.1 The firm in behavioral economic theory. Limited rationality in economic decision-making. The variable rationality model

At the present time there are more than two dozen directions of theory of the firm, each of which is based on certain scientific principles of research, methods and specific categorical apparatus. But neo-classical and institutional approaches do not cover the whole diversity of firm's nature, its internal structure and interrelation with external environment. One of the directions of studying complex world of decision making and firm management is behavioral theory.

The founder of the behavioral theory of the firm is considered to be G. Simon. On the basis of theoretical and practical research he developed the theory of normative algorithms of "right"decisions and introduced the concept of "bounded rationality"based on the assumptions that in conditions of environmental uncertainty and limited computational abilities economic agents are limited in their ability to accurately determine the goals and consequences of their decisions; they try to realize their goals not all at once, but in sequence; they choose goals that are satisfactory, not optimal, less than their maximum possibilities.

Behavioral theory studies center on the decision-making process of economic agents under conditions of excess of information, regarding the possibility of its processing, and the impact of these decisions on the development of the firm and its behavior in the market.

Behavioral theory tries to study the activity of economic agents in real situations, in the absence of presumption of economic rationality and in the market where the behavior of agents is not rational but conventional, and is subordinated not only to the utility maximization or profit maximization objective function, but also to the accepted rules and conventions, taking into account traditions, culture, mentality, social norms and developed standards.

It should be noted that the behavioral theory of the firm is based on a huge amount of empirical research conducted by different groups of economists, aiming to reveal "black box"of household and firm and to show how the real decision-making process is carried out, to find out its regularities. For this purpose the followers of the behavioral theory use different methods in their researches.

Generalization of empirical research using inductive method from particular to general led to the conclusion that the economic agent making decisions in endless amount of alternatives influenced by its own limited computing abilities and excess of information usually works in the system of choosing between two or three values of rationality function (-1 ;0; 1) (unsatisfactory, indifferent, satisfactory) and does not try to realize the maximum or ideal variant maximizing his/her profit and utility but chooses the first satisfactory variant according to his/her "level of pretensions"and ambitions and stops searching because of subjective estimation of possibilities which at this time and in this economic space he/she can count on. "The level of pretensions"is dynamic and depends on the statistics of the latest victories and failures of the agent. Experience of positive or negative results of agent's activity raises or lowers the level of pretensions, but "low"level is not interesting for the agent, and "high"one is chosen by him/her relative to being realistic and attainable.

The choice of acceptable option requires from the economic agent much less awareness and counting abilities than in neoclassical model. Complexity occurs when there is enough time to make a decision and it is possible to find several satisfactory variants, then the first and all next satisfactory variants are taken and then agent can raise the bar of pretensions level and repeat the procedure in order to find maximal utility and eliminate less beneficial solutions, but complexity of pretensions selection can lead to ambiguous effect and loss of time and money for additional calculations. If the agent's time is limited, the results are compared directly with each other or with the current indicators.

Limited rationality in economic decision making. Theory of bounded rationality – search and choice of satisfactory decision and orientation on habitual, established ways of behavior and decision making – the only formal model of human behavior, alternative to model of maximum utility and profit. The concept of bounded rationality is rightly criticized, because it doesn't give unambiguous and stable.

The model of maximum utility, unlike the model of economic behavior of agents, and its application in practice requires complex formulas, calculations and the use of a large amount of empirical data.

Г. G. Simon was one of the first to consider psychological factors in decision-making theory, together with J. March he became the founding father of the "behaviorist"theory, the essence of which is to interpret the psychological aspects of behavior in the process of choice in order to identify their motivations and advantages. In the course of his research the scientist developed **a model of bounded rationality,** which reflects the limited cognitive abilities of an individual in obtaining, saving, updating and processing information. To make the only correct decision concerning the choice to maximize the benefits the economic agent simply does not have enough computing power. The problem is not a lack of information, but rather too much information to process. In this regard, the economic agent with its limited information and computational abilities can not be a complete utility function that would allow to compare heterogeneous alternatives, and the decision-making process is reduced to the search for a satisfactory option. The researches of G. Simon and R. Heiner showed that the reaction of the agent to the information for optimal choice of the decision occurs only if the stimulus (danger, losses, actions of competitors) exceeds the threshold value, there is the so-called selective perception, that is up to a certain level of changing the usual picture of the world the agent has no reaction to deviations.

From the standpoint of behavioral economics the incentive to act is associated with unsatisfied aspirations, which disappear after their achievement. It follows that the firm will strive to achieve satisfaction rather than maximize profit. The model of satisfying behavior of the firm includes several provisions:

- If the results achieved do not match the level of aspirations, the firm begins to search for a new form of behavior in the market.

- In parallel the level of aspirations decreases to the level of really achievable goals.

- In case of discrepancy between aspirations and results emotional behavior that manifests itself as aggression or apathy is replaced by rational adaptive behavior.

Supplementing the theory of bounded rationality with the help of experimental research was undertaken by German economist R. Selten. He developed a three-level model of decision-making: habits – imagination – logical reasoning. At each level, from the lowest to the highest, there may be a different solution to the problem. Each level of decision making is accompanied by the problem of choosing the bar of pretensions and the zone of the nearest development, because of which the agent looks for decision either by habit or by imagination or logical reasoning. The agent's final choice is determined by the conditions of the real situation, psychological state and the prevalence of one or another goal.

The model of variable rationality. Harvey Leibenstein is the author of the concept of X-efficiency. So, according to the concept of variable rationality, the degree of rationality (deliberateness) of human behavior depends on two forces:

1) physiological – economy of thought energy, mental forces.

2) Social – standards and norms set before a man by society.

Physiological, animal human nature first of all requires to save thinking energy and mental forces. The more reasoned the decision is, the more work the economic entity will take in the process of its decision. If human behavior were determined by its physiological nature only, it would be minimally rational. In practice everything is different; the reason for it is a social nature of a human being, standards and norms that society sets before it. In many cases society requires from a human being a great expenditure of physical and mental forces – more reasonable and rational behavior is always more respected and brings more satisfaction. Therefore, in real life there is a conflict of social norms of behavior with physiological needs of a person and his desire for economy of effort. As a result, there is a degree of rationality that is optimal for mental comfort of individual and he/she decides on his/her choice. It means that the company is not able to use its employees' intellectual potential and achieve maximum efficiency and profit as the implicit contracts cannot regulate the employee's behavior seeking his/her own comfort completely. H. Leibstein calls this phenomenon inherent in any economic system "X inefficiency".

Psychological factors allow to explain differences in productivity of workers on the basis of the theory of small groups: 1) small production groups are to a certain extent more productive than large units; 2) groups consisting of friends and associates are more productive; 3) workers under common control are more efficient than those under individual control; 4) groups that have been communicated more about the importance of work are also more productive than those with less information. Hence the scientist concludes that greater management interest in a particular group of workers, other things being equal, increases individual motivation and leads to increased output.

Thus, the theory of bounded rationality, developed by Herbert Simon in the 1950s, represents a fundamental revision of classical economic ideas about the decision-making process. In contrast to the traditional model of homo economicus, which assumes full information and the ability to perform optimal calculations, Simon showed that real economic agents act under cognitive limitations, incomplete information, and time constraints. The human brain is physiologically incapable of processing all possible alternatives and calculating the long-term consequences of each choice, especially in complex economic conditions. Instead of searching for an ideal solution, people use satisficing - a strategy of choosing the first satisfactory option that meets the minimum acceptance criteria. This approach explains why consumers often buy products without comparing all available analogues, and managers make decisions based on limited analysis of data.

Key aspects of bounded rationality are manifested through specific cognitive mechanisms. People tend to rely on heuristics - simplified decision-making rules that have evolved to quickly navigate a complex environment. For example, the availability heuristic causes one to overestimate the probability of events that are easily recalled (like plane crashes after big news stories), and the anchoring effect causes one's assessments to depend on the information initially received (like the starting price in trading). Emotional states also limit rationality: fear causes one to avoid risks even with favorable probabilities, and excessive optimism can lead to underestimation of real threats. These features were experimentally confirmed in the works of Nobel laureates Daniel Kahneman and Vernon Smith, who showed systematic deviations from rational choice even in professional traders and managers.

The practical significance of the theory of bounded rationality has especially increased in the era of information overload and complex financial products. Modern behavioral research demonstrates that choice architecture can significantly improve the quality of decisions without eliminating cognitive limitations. For example, automatic inclusion in pension plans with the possibility of opting out increases the level of savings more effectively than financial education. In corporate governance, the consideration of bounded rationality manifests itself in the development of simplified project approval procedures and the use of algorithmic decision support systems. At the macro level, this theory explains the phenomena of market inefficiencies, bubbles, and crises that arise due to the mass adherence to simplified behavioral patterns. Thus, Simon's concept not only changed economic theory, but also gave rise to new approaches to the design of institutions that take into account the real, rather than hypothetical, capabilities of human thinking.

The variable rationality model is a modern development of the ideas of bounded rationality, offering a more flexible approach to the analysis of economic behavior. Unlike classical models that assume a fixed level of rationality, this concept recognizes that cognitive effort and depth of analysis can vary significantly depending on the context and importance of the decision. A person does not always act either completely rationally or completely irrationally - the degree of rationality varies depending on motivation, available attentional resources, and the importance of a particular choice. For example, when buying an apartment, people tend to conduct a thorough analysis of alternatives, whereas when choosing everyday goods, they more often rely on habits or simplified rules.

The model is based on the idea of adaptive decision making, in which economic agents consciously or unconsciously allocate their cognitive resources. This process is regulated by two key factors: the costs of collecting and processing information and the potential benefit of a more accurate decision. When the expected benefits of careful analysis do not justify the necessary mental effort, people switch to heuristics or emotional cues. Neuroeconomic research shows that this adaptive mechanism has a biological basis: the brain automatically evaluates the energy costs of making a decision and selects the appropriate information processing mode. This explains why even financial experts can make suboptimal decisions when tired or information overloaded.

The practical application of the variable rationality model is especially important for the design of economic institutions and policies. Understanding that the level of rationality depends on the circumstances, developers can create systems that either reduce the cognitive costs of important decisions (for example, simplified forms of loan agreements) or motivate deeper analysis (as in the case of pension savings). In marketing, this model helps explain the effectiveness of different communication strategies for complex and simple products. Financial regulators use the principles of variable rationality to protect consumers - for example, by introducing mandatory "cooling off periods"for large transactions, when the initial emotional decision can be revised. Thus, the model not only describes economic behavior, but also offers tools for its optimization in real conditions of cognitive limitations.

4.2 The firm as a coalition of participants. The development of the behavioral theory of the firm. Social-evolutionary theory of spiral dynamics

Logical development of behavioral theory of firm was received in works of R. Sayert and J. March who defined firm as a coalition of individuals and divisions. The given theory has not lost its urgency and important theoretical value and nowadays behavior of firm depends on decisions made by participants of coalition and is defined by the purposes, expectations and choice of firm, and also a degree of control over execution of the chosen decision.

To make decisions in the Sayert-March behavioral model, the firm forecasts demand for its products, forecasts the behavior of competitors, estimates costs and formulates goals from the above-mentioned.

The conclusions reached by R. Sayert and J. March in their research are as follows:

- Search for information by the firm is not carried out regularly, but as an exception, in those cases when the existing organizational solutions have proved ineffective in the changed conditions.

- Assumed new variants of behavior of the firm are compared not among themselves, but with the existing solutions and evaluated in terms of compliance with the most important parameters of activity, mainly, whether the firm has the funds in the budget for the project and changes.

Note that many leading firms act just the opposite, achieve success through regular monitoring of the environment and continuous search and application of technological and institutional innovations.

The firm as a coalition of participants is forced to find a compromise between all the interested groups and individual participants and take into account the totality and mutual influence of their goals. Intrafirm routines, which reduce decision making to the accepted and perfected procedures, have the strongest impact on the agreement of the goals. It sometimes leads to difficulties in achieving fast and effective results, including the limitation of the budget of the company, because it is accepted not the best, and satisfactory result, compared not with new alternative solutions, but with the previous non-working procedure or technology, which may be beneficial to individual participants, showing opportunistic behavior.

Conflicts arising within the firm, occur due to different interests and goals of the main influence groups, which determines the trajectory of development of the firm and the direction of its activities.

Conflict passes through three stages in its development, characterized by the dynamics of internal psychological tension:

- The first stage – the initiative of the conflict – is associated with the identification of the essence of value differences and the concentration of negative emotions;

- The second stage, identification of ways out of the situation, the search for compromise, is associated with a decrease in negative emotions and the emergence of a sense of understanding and agreement, finding ways to resolve the conflict;

- The third stage – conclusion of an agreement on conditions of joint activity – ends with completely joyful feeling as from any well done work.

The results of intra-firm and intercoalition conflicts serve as a basis for formation of rules of access to assets and resources controlled by the firm. The firm develops the rules of the game and goals, which can be achieved within the institutionally defined space of opportunities, choice of solutions and incentives. Institutional space of the firm keeps agents with different economic behavior inside the coalition, structures and fixes socially recognized practices of different economic interests struggle, providing stability of economic activity.

The development of behavioral theory of the firm. Itzhak Calderoy Adizes – one of the experts in the field of increase of efficiency of business and governmental activity, has developed the theory of organization life cycle including different stages of firm's evolution.

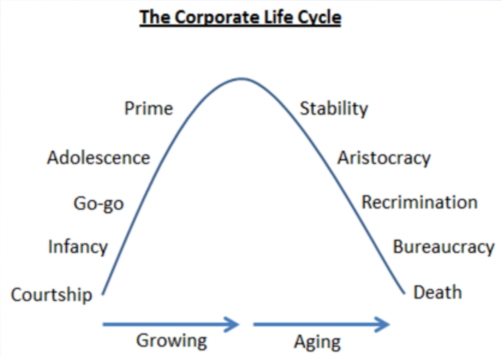

Figure 4.1 – The life cycle of an organization according to I. Adizes

According to the theory, all organizations, like living organisms, pass through similar stages of the life cycle and demonstrate predictable and repetitive behavior patterns, which must be considered in practice when designing a firm development strategy.

Henry Mintzberg is one of the brightest researchers of organizational structures. In Russia he is known for his books "Structure in the Fist "Strategy Schools "Strategic Process".

H. Mintzberg proposed his definition of the firm's strategy in the framework of the following model:

1) a plan;

2) a method as a tactical move;

3) a behavioral model (behavioral strategy);

4) position in relation to others, or positional strategy;

5) perspective or perspective strategy.

Success comes if the members of the organization are like-minded, that is, they believe in the main doctrines and practically implement them in their daily work and life.

The social-evolutionary theory of Spiral Dynamics. The theory of spiral dynamics was developed by the American psychologist Clair William Graves.

Modern firm can be represented as a union of owners of specific resources, primarily knowledge assets, in the assumption that for this very firm they provide the greatest return, with the aim not only of getting income from their activities, but also self-realization of the participants of the firm in the form of achieving non-material, social, subjective goals, priorities and values of knowledge and exploration of the world.

The theory of Spiral Dynamics is a new tool to improve the effectiveness of the manager and the company as a whole.

Spiral Dynamics is a model of human development and values, developed by psychologist Clare Graves and later expanded by Don Beck and Chris Cowan. This concept describes the evolution of individual and collective thinking as a sequence of wave-like stages, each characterized by a certain value system, way of perceiving reality, and approach to problem solving. Unlike linear models of development, Spiral Dynamics emphasizes the dynamic nature of this process - when life conditions change or new challenges arise, a person or society can move between levels, return to previous stages, or integrate several value systems simultaneously. Each stage in Spiral Dynamics is designated by a certain color and reflects adaptation to increasingly complex conditions of existence. For example, the level of "purple"thinking is associated with mystical consciousness and orientation toward tribal traditions, while the "red"level is characterized by egocentrism and the desire for immediate power. More complex levels, such as "orange"(strategic achievement of success) or "green"(striving for harmony and equality), arise as a response to the limitations of previous systems. A special feature of the model is the understanding that higher levels do not cancel the previous ones, but transcend them - preserve their useful elements in an integrated form. Thus, a modern person can demonstrate "blue"behavior (following the rules) at work, "orange"(competitive) in business and "green"(empathic) in family relationships.

The practical application of Spiral Dynamics is especially noticeable in organizational development, politics and social change. Business consultants use this model to diagnose corporate culture and select personnel, accordingly building motivation systems - from material incentives for the "orange"level to meanings and values for "yellow"and "turquoise". In international relations, understanding value differences helps to find approaches to negotiations with cultures at different stages of development. Critics of the model note its excessive universality, but the ability to explain and predict reactions to socio-economic crises confirms its heuristic value. In the era of global transformations, spiral dynamics offers an important tool for understanding how individual and collective value systems adapt to the challenges of technological revolution and environmental threats.

The head of the organization collides with people of different para-digmas, and it is necessary to find an approach to each of them. Nevertheless each organization, as well as each person has "color"– it is defined either by majority of people who are in it, or by the head (it is about "color"of the person, that is his "color"at work, it is important for definition of "color"of the company). In modern conditions, the behavior and position of the firm on the market is determined, among other things, by its organizational abilities to find competitive, coordinated, group decisions with or against its own bureaucratic procedures and decentralized activity of departments. The probability and quality of such decisions increase when the firm forms and maintains a long-term value system, which in turn is itself a coordinated decision of the majority of participants to a greater or lesser degree. The behavior of the firm is also determined by the extent to which the developed value system corresponds to the ideal model, where each member of the coalition demonstrates loyalty to the firm, obligation, developed by effective training, personal identification with the success of the company, diligence and humane human attitude to each member of the firm.

Thus, steadily developing firm has maximal limits determined not only by control costs but also by the costs of consideration and resolution of conflict of interests of all participants of the coalition, and firm objectives in geometrical form can be represented as a sum of vectors of interests, goals and values of all participants of coalition agreement where size and direction of vector will be determined mostly by main influence groups.

Realization of behavioral theory of firm in new economy.

Objects and objects of production and consumption are transformed in the new economy. The dominant type of product demanded on the market changes. Two authors, J. Pine and J. Gilmore, analyze the evolution of supply forms at the market and distinguish basic types of dominant product: raw materials, goods, services, emotions (see table 3).

Table 3 – Evolution of dominant product forms in the market

Product indicators	**Raw materials**	**Goods**	**Services**	**Emotions**
Mode of origin	They are extracted	They are produced	They are given	They are created as a creative act
Nature of good	Material	Tangible	Intangible	Sensations, involving memory, emotions, intellect and thinking
Key feature	Desaturated	Standardized	Differentiated	Personalized
Seller	Wholesaler	Manufacturer	Supplier	Supplier, environment maker
Economy type	Commodity economy	Economy of goods	Economy of services	Economy of impressions

There is an evolutionary transition in the development of the economy: industrial economy of goods – economy of services – economy of impressions – economy of transformations. The essence is reduced to the following chain: raw materials are equivalent, goods are tangible, services are intangible, and impressions are unforgettable.

According to the authors, at the present stage the "economy of impressions"is being formed, which begins to displace the economy of services. Impression is a type of economic offer, not equivalent to a service. Information by itself cannot become the basis for a new economy, only information in the form of information services, information products, or information impressions, where there is a qualitatively new customer value. The buyers of impressions value the direct participation in the action, which is organized by this or that company. First, consumers save money on goods to buy more services, then save time and money on services to acquire experiences that are more valuable to them.

Consequently, the new economy needs new business models to produce innovative products. Firms' strategies should focus on improvements of all kinds, staff reorganizations, and cost reductions. The concept of temporary competition and the individual path to market development is based on the following tools:

- Information and digital technology;
- the pursuit of mass personalization and self-organization;
- out-of-the-box thinking instructors;
- creative education;
- innovative solutions.

If society seeks prosperity, it must use impressions to increase the consumer value of its offerings, goods and services alone are not enough for this.

The transition from a supply economy to a demand economy intensifies competition in the market for consumer income in three ways:

- Increased competition between goods of the same product group by expanding the assortment;
- between goods of different groups – food and non-food – due to the acceleration of moral wear and tear of the latter;
- between diverse goods and no less diverse services.

Improvement in the quality of goods reflects an increase in utility for the consumer, but is not taken into account in calculations of GDP. A number of countries use the economic approach with an implicit price, which allows us to evaluate such goods as some goods, providing a set of characteristics (speed, power, memory capacity, etc.), which is called "hedonic pricing". It is used to determine changes in prices for complex and rapidly improving goods, such as smartphones, tablets, cars. For example, the quality of new computers, according to estimates of the U.S. Department of Commerce, has increased by 15% per year, which provided 1.15 times more services every year. At the same time their price is gradually decreasing by about 10% per year. In aggregate, the price decline with quality is approximately 25% every year, that is, a unit of money spent on such goods today, 108 times more computer services than 20 years ago.

The life cycle of goods shortens in information economy, which increases the intensity of consumption. Consumers substitute new goods in consumer goods basket up to the moment of loss of physical wear and tear of consumer properties.

There is a new type of consumption, which becomes a kind of collecting. Each thing is not functional by itself, it has value only in the ensemble. Collecting is a permanently incomplete process due to the law of unsaturation. People in a society of abundance are surrounded by objects of consumption. The product is perceived as a gift, a purchase of a part of the whole. The objects are organized into sets, collections, ensembles, where all the goods are interconnected. Consumer attitude to the subject of consumption has changed: the consumer is not focused on the benefit, and considers it as an ensemble of objects in their holistic meaning. Brand name imposes inseparable, group vision of objects as an inseparable whole. The value of one item is small, but the increment of its value for the whole collection is incommensurably bigger. In this case, the price and value do not coincide, which is considered a norm in the new economy.

Brandism as a stable tendency to create images of products, producers, people and events is getting stronger. As N. Klein notes, there is a fundamental difference between a product and a brand. A product is something made in a factory, a brand is something that consumers buy. Superbrands need space, a lot of surfaces, on which advertising logos are stamped. Plants and factories transfer to cheap countries, transfer to contractual way of production, place orders abroad, reducing at most production on its territory. The growth of expenses on marketing, corporate mergers and expansion of brands is accompanied by a reduction in investment in the means of production and staff reduction, the share of wages in the production costs compared with 1970-1980s. There is a discouragement of the real production process and commodity producers. Branding becomes the main resource for increasing added value. The brand creates the value of the product and not vice versa. According to F. Knight, "added value is not created in the production of goods. Its source is in thorough research of the market, in innovation and marketing". Advertising and sponsorship are based on the use of imagery to create an associative link of goods with positive cultural and social events. Sponsorship devalues the event itself; when the commercial is embedded in the cultural, then the integrity of the public sphere is weakened. The advertising message is being permanently integrated into the processes of daily life.

In the new economy, supply exceeds demand every day through technology, and demand must be constantly stimulated. The preconditions for manipulating ideas and postulates in the public consciousness are being created and there is a purposeful impact on the mass consumer of information products using a variety of technical means of information meta-technology.

In the theory there is a new direction of Public relations (PR), the founder of which was made by E. Bernays. The main tool is advertising and PR-campaigns, aimed at "producing"consumers."The practical implementation guide states: man's natural needs are limited, while his desires are limitless by nature. It follows that unconscious instincts and irrational motives, fantasies and unconscious desires must be investigated and acted upon. Advertising should not appeal to the practical sense of customers, it should contain a message that gives simple objects of consumption symbolic meaning. It is necessary to appeal to human emotions, to create a culture of consumption and typical consumer who finds in consumption a means of self-expression and self-identification. The main purpose of advertising is to sell products that are passed off as works of art by disseminating symbolic, social and aesthetic norms, and these norms should be fluid and short-lived so that they can be quickly replaced by new ones. R.Kurz notes that modern advertising does not simply encourage to buy goods, but is engaged in modeling the consciousness of the consumer through new technologies. Consequently, the development of own domestic brands of Russian companies can become an effective competitive strategy in the fight for the consumer, both in the domestic and foreign markets.

Behavioral basis of interaction in the virtual environment of the Internet. In today's world, where consumers do not have enough time, and all businesses are trying to improve the speed of operations, the Internet is becoming a virtual environment where you can buy or sell any goods and services. Businesses that do business in an electronic environment are offering great discounts for customers. This tendency is connected with reduction of the number of intermediaries. Many companies are trying to avoid retailers, agents and distributors in order to reach the final consumers themselves. As a result intermediary companies are forced to reduce the number of employees, in an extreme case to declare bankruptcy.

The prospects for the development of network markets are largely dependent on the companies involved in the Internet sector of the economy. The better, more affordable and secure their offerings are, the faster consumers will come to trust online purchases. An important role in this should play information and training regarding online tools, many consumers are not aware of the possibilities of electronic money, online payments, etc.

According to D. Tapscott, most people have followed a limited economic role, as passive consumers of mass production, they were excluded from the processes of knowledge, power and capital exchange and, consequently, from the distribution of economic resources. In the new network society consumers do not only use networks for buying and selling goods and services, but they themselves are actively involved in the production process, that is, their knowledge, information and considerations are used in determining the technical characteristics of the products. Their role is essentially transformed (see table 4).

Table 4 – Change of the consumers' role functions in the network economy

Characteristics	**Old economy**	**New economy**
Role	Viewer/Listener	User
Attitude	Passive	Active
Function	Receiver	Programmer
Location	Home/work	Everywhere

Profound changes in the structure and organization of the economy are accompanied by the formation of wikinomics, i.e. a virtual economy based on new principles:

- Openness-transparency, i.e., information disclosure-the basis of the networked economy. Consumers are able to understand the real value of the product.

- Peering is a new form of horizontal organizations. People self-organize to create new goods or services, shared knowledge, experience sharing.

- Access and ability to share experience.

- Global nature of activities.

Peering model is peer-to-peer production, a new model of innovation and value creation. Peer production communities are being formed, which are changing many industries, including publishing, media, entertainment industry, financial services and manufacturing.

Crowdsourcing is actively spreading in networks (from English crowdsourcing – ant technology) – it is work on projects of unpaid amateurs in their free time, using collective mind and labor of volunteers for different useful purposes, including commercial. Crowdsourcing method is used for creating new goods and services, selection of ideas and coordination of efforts, development of social norms of behavior, forming of system of status distinctions, helps to distinguish really necessary knowledge from the information flow.

In the new paradigm the central place is given to the requestumers, the consumers want to play a real role in developing the products of the future on their own terms, in their own networks, for their own purposes and interests.

The requestumers (from producer + consumer) are not just consumers of the final products, but active participants in its creation. In the infomain every consumer becomes a manufacturer at the same time, when he creates and sends a message, runs the virtual car, creates the desired design on the computer screen. Consumers' ideas, information and technology become part of products, the content of knowledge in goods and services increases. Consumers consider the whole real world as a space for creativity and consumption, they change the configuration of products for their own purposes. These are creative consumers who implement active consumer development, do not differentiate between production and consumer activities, for them consumption serves as a source of development.

Consumers organize themselves into self-structuring social organizations – smart mobs that use technological achievements for consumer purposes. Uniting, they function in the network on special platforms of ideagores – meeting places of ideas, innovations and unique brains, which resembles an online internet auction or "exchange of ideas"for innovations.

Consumers become real participants of innovations. Innovators signal the direction in which the main market is moving, they expand the limits of existing technologies and create their own product prototypes. Consumer innovations are moving to self-service. Consumer innovations, amateur creativity companies consider as a new solution to non-standard problems, but many firms often ignore them.

Prosumer approach is actively implemented by market leaders. Pe-red companies are involving users in development of next generation products and services. For example, a company Second Life creates a product that attracts consumers and allows them to cooperate and add new value on a mass scale throughout the whole life cycle of the product. BMW uses a "virtual innovation agency"involving its consumers for virtual development (navigation, ergonomics, design). Lego Factory – 2005 offers client-oriented development allowing customers to design, exchange and order their own sets of construction kits in virtual warehouses.

The use of the customer-oriented communities can go in the following directions:

- Customizing the product for the user – customization, mass customization and production on an equal footing.

- Creating active ecosystems of users in which customers help to improve, implement and market new features of products. Turns its customers into a decentralized development team.

- Deep and early inclusion of consumers in the product development process, including the possibility of hacking. Consumer hacking (social hacking) promotes the development of "homegrown"but unique and free applications.

Formation of conditions for innovations and cooperation with consumers, providing space, tools, materials for creating additional value for the firm's products. Making goods modular, reconfigurable, changeable.

Prosumerism is mutually beneficial: consumers get more than they expect, companies get free research and development. Consumers will expect their share of ownership and the fruits of the investment of intellectual labor.

Modern firms, operating in the consumer segment and striving to be competitive, should introduce new technologies and develop measures that contribute to a fuller satisfaction of consumer demand in the information economy:

- Intensively develop the market for online goods, ICT goods, online and offline services, and creative goods;

- actively use the power of social and electronic networks, strive to develop sites, chat rooms, and other electronic resources;

- Promote the development of consumer communities, establishing direct "consumer-producer"relations;

- to implement peer-to-peer models, a new model of innovation and value creation by consumers;
- to use crowdsourcing methods, i.e. to involve non-paid amateurs in their spare time to work on projects to create products, to use the "collective intelligence"and the work of volunteers for various useful purposes.

Thus, the full impact of the Internet on the economy and consumers remains uncertain, despite the rapid growth of available means of communication and connectivity to information. The important conclusion is that the Internet is becoming a key economic infrastructure, radically transforming the economy and serving as a platform for innovation, developing network interactive relations and involving in them a growing number of consumers and producers.

5 BEHAVIORAL THEORY OF CONSUMPTION

Behavioral theory of consumption. The main concepts of the behavioral theory of consumption. Subjective-psychological concept of the cycle. Psychological features of consumer choice. The influence of information cascades on consumer behavior. Applied aspects of behavioral theory of consumption. The latest trends in consumer behavior in the market. Ecologization of consumer behavior. Aestheticization of consumer behavior.

Sources: [3, 4, 5, 6, 9, 10, 12, 16]

5.1 Basic concepts of behavioral theory of consumption. The subjective-psychological concept of the cycle. Psychological characteristics of consumer choice

Behavioural consumer theory is an interdisciplinary approach that combines economics, psychology and neuroscience to study the factors that influence consumer choice. Unlike classical economic theory, which assumes rational agents maximising utility, the behavioural approach examines the real mechanisms of decision-making, taking into account cognitive limitations, emotional reactions and social context. The main emphasis is on systematic deviations from rational behaviour, such as framing effects, anchoring effects and status quo bias. These phenomena explain why consumer decisions often contradict standard economic predictions - for example, when people overpay for branded goods, ignoring cheaper analogues of similar quality, or maintain inefficient consumption habits despite awareness of their irrationality. One of the key concepts is the mental accounting theory proposed by Richard Thaler. It describes how people create separate "accounts"in their minds for different categories of expenses (food, entertainment, savings), which leads to suboptimal resource allocation. For example, a consumer can simultaneously have credit debts and a savings account, since he or she psychologically separates these financial flows. Another important aspect is the role of emotions in consumption. Research shows that affective states significantly affect purchasing behavior: stress increases impulsive purchases, and positive emotions increase the propensity to take risks when choosing new products. The concept of social comparison occupies a special place - consumption often serves as a tool for positioning oneself in the social hierarchy, which explains the phenomena of conspicuous consumption and the "bandwagon effect". Modern developments in the behavioral theory of consumption integrate neurobiological approaches, studying how the brain evaluates alternatives and makes a choice. Neuroeconomic experiments have revealed the role of the dopamine system in the formation of consumer preferences and the mechanisms of cognitive dissonance in post-purchase evaluation. Practical application of this knowledge includes the development of "nudge"strategies for healthy eating, responsible financial behavior and environmentally friendly consumption. For example, changing the arrangement of products in a supermarket or the wording on the menu can significantly influence the choice without limiting the consumer's freedom. These insights are especially important in the digital age, where personalization algorithms and targeted advertising pose new challenges to consumer sovereignty, requiring the development of behavioral literacy as a defense mechanism against manipulative practices.

In the process of interaction with the external environment the functional economic role of consumers increases significantly, whose behavior becomes active, endogenous, rather than passive and exogenous, as before. Personal needs and economic interests are the basis of consumer's active choice. With the development of information society needs change and develop, the target settings of subjects are changing, thus changing the content of their interests and motives of economic behavior and consumption patterns.

Methodological approach in behavioral economics is initially connected with criticism of rationality in human behavior which abilities are limited because of inaccessibility of full information and addiction to habits and emotions. Purpose function becomes more complicated here and acquires a new quality – creative character of needs satisfaction. In this case the phenomenon of creativity refers rather to the area of jumping from the level of current needs in existing goods and services to the level of "perspective"need, which consists not only in increase of own welfare, but also in self-organization, striving to perfection, to achieve greater control over external circumstances. In addition to traditional, there are specific motives of consumer activity, such as ensuring mental comfort in the process of activity and decision-making, establishing a consistent system of values, its emotional equilibrium, avoiding excessive stress, etc. Purpose function is not so much as a desired result as a criterion of choice process efficiency.

L. Festinger's theory of cognitive dissonance. The theory of cognitive dissonance, developed by Leon Festinger in 1957, is one of the most influential concepts in social psychology, explaining the mechanisms of change in human beliefs and behavior. Cognitive dissonance occurs when a person is faced with a contradiction between his or her attitudes, beliefs, or knowledge and new incoming information or their own actions. This state of psychological discomfort motivates a person to search for ways to reduce dissonance, which can manifest itself in changing beliefs, searching for additional information, or reassessing the significance of conflicting elements. For example, a smoker who is aware of the harm of his or her habit can either quit smoking (change behavior), or convince himself or herself that the risk is overestimated (change belief), or focus on the positive aspects of smoking (reassess the significance of information).

The peculiarity of Festinger's theory is its emphasis on the motivational aspect of cognitive processes. Dissonance does not simply create discomfort - it activates psychological defense mechanisms aimed at restoring internal consistency. Experimental studies, including the famous "for $1 or for $20"study, have shown that people who received a smaller reward for performing a boring task subsequently rated it as more interesting. This paradoxical effect is explained by the fact that the small reward could not justify their actions, creating dissonance that was reduced by changing their attitude toward the task. Such phenomena have important implications for understanding consumer behavior, political beliefs, and even religious beliefs, demonstrating how people unconsciously distort reality to maintain internal equilibrium.

Practical applications of cognitive dissonance theory span a variety of fields, from marketing to psychotherapy. In consumer economics, post-purchase dissonance explains why shoppers actively seek out information that confirms their choices and avoid contradictory information. In politics, the theory helps us understand the persistence of ideological beliefs even in the face of disconfirming evidence. In an organizational context, managers can use knowledge of dissonance to gently implement change, gradually reducing the gap between new demands and employees' existing attitudes. Critics of the theory note that people differ in their tolerance for dissonance and their methods of overcoming it, but its predictive power and ability to explain a wide range of seemingly irrational behavioral patterns confirm its importance for understanding human behavior in the face of information overload and the complex choices of the modern world.

Festinger cognitive dissonance is understood as a subject's avoidance of a state of psychological discomfort, which arises as a result of internal contradiction in the belief system. The phenomenon of cognitive dissonance is especially widespread where there is a great influence of uncertainty, which is characteristic of Russian economy. Firstly, it creates time lag between getting information and reaction on it; secondly, it blocks negative information; thirdly, it makes people make decisions taking into account not only future but the past as well. Cognitive dissonance can be reduced in several ways: to block one of the conflicting beliefs; to acquire additional information that will help clarify the essence of the contradiction; to take action that will eliminate one of the dissonant elements. Of these alternatives, as a rule, the one that causes the least opposition is chosen. It follows that people tend to ignore negative information rather than change their behavior.

Within the framework of the psychological approach **J. Shackle** develops the **concept of economic imagination,** where the necessary prerequisite of the present active choice is ignorance, which liberates imagination that plays a paramount role in the act of choice. He defines the goal of creative choice as achievement of a good emotional state by an individual.

The concept of economic imagination, developed by the British economist George Shackle, is an original approach to understanding decision-making processes under conditions of fundamental uncertainty. Shackle rejected neoclassical ideas about the probabilistic nature of future events, arguing that true uncertainty arises when it is impossible to list all possible outcomes or assign them meaningful probabilities. In such conditions, typical of investment decisions, innovations and financial markets, it is the imagination that plays a key role - the ability to create and revise scenarios of possible futures. Economic agents rely not on calculations, but on narrative constructions similar to fiction, which help organize the chaos of uncertainty into coherent stories about future opportunities and threats.

A distinctive feature of Shackle's approach is the emphasis on the creative nature of economic choice. Unlike optimization models, his concept describes the decision-making process as a step-by-step narrowing of a set of imaginary possibilities through the mechanisms of attention and concentration. An entrepreneur, for example, does not calculate the optimal option, but consistently discards implausible scenarios, concentrating on a limited number of significant possibilities. This process is purely subjective and depends on the individual experience, knowledge, and even mood of the decision maker. Shackle introduces the concept of "potential surprise"as a measure of the subjective perception of the probability of events - the less expected the outcome, the more surprised it is, which correlates with its psychological significance for decision making.

The practical significance of the concept of economic imagination has especially increased in the context of modern financial markets and the digital economy. It helps explain the phenomena of stock market bubbles, when the collective imagination of investors creates overvalued narratives about technological possibilities, or sharp changes in consumer preferences associated with the emergence of new cultural images. In entrepreneurship education, Shackle's approach substantiates the importance of developing narrative and visual skills along with analytical ones. Critics note the difficulties of operationalizing his ideas for quantitative models, but in the era of artificial intelligence and big data, the concept of imagination as a filter for uncertainty takes on new resonance, offering an alternative to traditional probabilistic approaches in the analysis of complex, rapidly changing economic systems, where past data poorly predicts future events.

The evolutionary concept of J. Foster is of particular interest in the field of motivation of economic behavior of households. Any kind of economic activity, including distribution of income for consumption and saving, is considered here as acquisition of energy for reproduction of human internal structural characteristic, i.e. tastes, abilities, skills, knowledge. G. Foster understands motivation as maximization of coordination between subject of consciousness and environment. Skills, tastes and so on are formed as a result of such interaction. However, negative influences of external conditions can cause deformation of person's internal structure. Defending himself, the subject tries to creatively change the outside world, embodying ideas and other products of his own consciousness in his activity, which he correlates with pretensions. If the result of relations is satisfactory, the level of pretensions rises, higher goals are set. In the opposite case a person falls into a state of frustration, there is a decrease in pretensions and general self-esteem that greatly reduces the creative potential and requires a lot of effort for recovery. Hence the known inertness of consumer behavior of subjects.

John Foster's evolutionary theory is a synthesis of economic theory, evolutionary biology, and institutional theory, offering a new perspective on the dynamics of economic systems. The concept is based on the idea that economic evolution occurs through processes of variation, selection, and maintenance of institutions, technologies, and organizational forms, similar to biological evolution but with important differences. Foster emphasizes the role of deliberate human creativity and institutional learning as driving forces of economic development, in contrast to random mutations in biology. His approach emphasizes the cumulative nature of economic change, where new solutions do not emerge in isolation but as adaptations and developments of existing practices through trial and error.

A key element of the theory is the concept of an "economic organism a stable configuration of institutions, technologies, and organizational structures that reproduces itself over time. These organisms compete with each other for resources and survival, with selection occurring not only through market mechanisms, but also through political processes, social norms, and cognitive frameworks. Foster identifies three levels of economic evolution: genetic (basic institutions and technologies), phenotypic (specific organizational forms), and memetic (the spread of ideas and practices). Of particular importance in his theory is the concept of "coevolution the interconnected development of technological, institutional, and cultural changes, when progress in one area creates the preconditions for transformations in others.

The practical application of Foster's evolutionary concept is especially important for the analysis of innovation processes and economic policy. His approach explains why some countries or regions are more successful in adapting to technological change - this depends not only on available resources, but also on the flexibility of institutions, the ability to organizational learning, and the presence of "diversity"in the economic system. Unlike traditional growth models that emphasize investment and human capital, Foster's evolutionary approach suggests considering economic development as a complex nonlinear process, where historical contingencies, path dependence, and the system's ability to self-organize play an important role. These ideas have applications in regional policy, innovation management and strategic planning, offering a more flexible framework for analysis in the face of uncertainty and rapid technological change.

Changes of economic behavior of households at the micro-level explain some psychological theories of motivation, which have application in the theory of consumption. In particular, the **psychological variant of K. Bayer's target function** consists in minimization of risk in distribution of income on consumption and saving, it is especially actual in the conditions of depressive economy.

D. Kahneman and A. Tversky made a significant contribution to the development of the theory of consumer behavior. The scientists, based on an analogy with per- perceive adaptation, believed that decision-making will depend on the starting point, that is, people will react differently to the same situations, depending on whether they lose something or gain something. On this basis the following conclusions were made: firstly, that people are not able to evaluate future income in absolute terms, they evaluate it in comparison with the usual level of income or with the level that has developed; secondly, with the same risk people are more inclined to maintain the achieved financial level, than to increase it. This is due to the fact that the human psyche perceives not so much the absolute value of one's wealth but its change, and the joy of winning is less than the bitterness of losing.

Subjective-psychological concept of the cycle. It is useful to analyze the problem of motivation of consumer behavior from the perspective of the theory of economic cycles. Among many different classifications of the cycle theory the most interesting for the research of this problem is the subjective-psychological concept of cycle, which assumes that specific psychological factors determine the trajectory of economic behavior of the subject. Moreover, they are not reduced to the influence of objective reasons but acquire an independent meaning because the supremacy of emotions, the weakness of rational calculation, errors and exposure to extraneous influence are most clearly seen exactly at the critical points of the economic cycle.

The subjective-psychological concept of the economic cycle is an approach that explains fluctuations in business activity through the prism of psychological factors and collective sentiments of economic agents. Unlike traditional theories that focus on material factors of production or monetary indicators, this concept views cycles as the result of waves of optimism and pessimism that affect entrepreneurs, investors, and consumers. The basic idea is that economic decisions are not made on the basis of objective calculations, but under the influence of emotional states and socio-psychological tendencies that can be amplified through contagion and imitation mechanisms. For example, a boom period is characterized by excessive optimism, when inflated expectations of profit lead to risky investments and credit expansion, while a crisis is accompanied by panic withdrawals of funds and a curtailment of economic activity that does not correspond to real fundamental indicators. The development of this concept is associated with the work of economists such as Arthur Pigou and John Maynard Keynes, who introduced the concept of "animal spirits"to describe the irrational component in economic behavior. Modern versions of the subjective-psychological theory integrate the achievements of behavioral economics and neurofinance, showing how cognitive distortions (such as overconfidence, herd behavior, or anchoring) systematically affect the cyclicality of markets. Particular attention is paid to the role of narratives and the media in shaping collective expectations - positive or negative stories can accelerate the transition from one phase of the cycle to another, creating self-fulfilling prophecies. For example, the spread of pessimistic forecasts can turn a normal market correction into a full-fledged crisis due to mass asset withdrawal and spending cuts.

The practical significance of the subjective-psychological concept is manifested in the field of economic policy and financial regulation. Understanding the psychological mechanisms of cyclicality justifies the need for countercyclical measures, such as tightening regulation during boom periods or stimulating policies during downturns to counteract self-reinforcing pessimistic expectations. In corporate governance, this concept helps develop risk management systems that take into account not only objective indicators but also the psychological climate in the market. Critics of the approach note the difficulties in quantifying psychological factors, but the financial crises of recent decades, often inexplicable by traditional models, confirm the importance of taking into account subjective elements in economic dynamics. Thus, the subjective-psychological concept offers valuable insights into understanding the underlying causes of economic instability, complementing materialistic explanations of cycles with an analysis of human perception and behavior under uncertainty.

V. A. Yor's theory of systematization of psychological factors. The theory of systematization of psychological factors by Viktor Alekseevich Yor is a comprehensive approach to the analysis and classification of psychological determinants of economic behavior. Within the framework of this theory, psychological factors are considered not as random or secondary elements, but as system-forming components that form stable patterns of decision-making. Yor identifies several levels of influence of psychological factors - from individual cognitive characteristics to collective socio-psychological phenomena, emphasizing their interrelation and ability to reinforce each other. Particular attention is paid to the mechanisms of transformation of subjective psychological states into objective economic results, when, for example, mass optimism of investors leads to real growth of market indicators, and pessimism of consumers - to an actual decline in business activity.

The central element of the theory is the taxonomy of psychological factors developed by Yor, which includes three main categories: cognitive (perception, information processing, decision-making), emotional (affective states, moods) and volitional (motivation, self-regulation) components of economic behavior. Each category contains a detailed classification of specific phenomena – from cognitive distortions known in behavioral economics to less studied effects of emotional contagion in professional communities. Of particular value is the concept of "psychological constellations"proposed by Yore – stable combinations of various factors characteristic of certain economic situations. For example, the combination of excessive confidence, herd behavior and euphoria forms a typical constellation of the financial bubble period, while crisis phenomena are characterized by a different combination – fear, cognitive dissonance and hyperbolic discounting.

The practical application of Yore's theory is reflected in several areas. In the field of corporate management, it is used to develop motivation systems that take into account not only material incentives, but also the psychological needs of employees of different professional groups. In the financial sector, this theory is used to create early warning models for crises that monitor not only economic indicators, but also the psychological climate among investors. In macroeconomic policy, Yore's approach substantiates the need to take into account psychological expectations when developing anti-crisis measures. Modern development of the theory is associated with the integration of neuroeconomic methods that allow verification of psychological factors through objective indicators of brain activity. Despite the certain complexity of operationalization of some of Yor's concepts, his systemic approach to psychological factors significantly expanded the methodology of economic research, offering a holistic scheme for analyzing the interaction of mental and economic processes at the micro and macro levels.

The scientist singles out factors that intensify cyclical fluctuations of consumption-savings ratio in the conditions of uncertainty: Firstly, the current state of conjuncture, in particular the fulfillment or non-fulfillment of expectations of the previous period; secondly, the emotional state of economic subjects – the mass mood of pessimism or optimism, which covers different groups of population with different speed; Thirdly, "establishment that is actions based on expected changes in conjuncture in the near future related to the movement of consumer prices; fourthly, "monetary illusion that is belief in the invariable value of monetary unit; fifthly, "cyclic memory that is confidence that after the rise comes the fall and vice versa. According to this theory, decisions concerning income distribution on consumption and saving are subject to external influence of social and psychological factors, in other words, a kind of "psychological infection which destabilizes development and causes deviations in consumer behavior.

A significant contribution to the development of behavioral economics is made by **the theory of J. Katona,** who is trying to synthesize micro- and macroeconomic approaches to the study of the consumer function, designed to explain and predict the cyclical movement of the economy. The author divides all consumer spending and savings into contractual (obligatory) and discretionary (non-obligatory). Contractual types of consumption and savings, including expenditures on basic necessities, housing, utilities and transport services, contributions to non-state pension and insurance funds, are made, as a rule, out of habit and depend only on the size of income. Whereas discretionary expenses on durable goods and non-mandatory saving are determined by influence of intermediate psychological variables, such as opinions, expectations, moods, pretensions, – intermediate in the sense that any influence of objective economic factors on consumption and saving passes only through them. Cyclicality is explained by changes in the structure of personal consumption in favor of essential goods, which in a depressed economy are determined by the state of growing pessimism, caused by various reasons. They include, first of all, inflation through the influence of price growth on deterioration of expectations and moods as well as measures taken by government: increase of taxes, reduction of state expenses, toughening of credit conditions and others. During the crisis people's feelings remain at a low level as a result of the growth of unemployment, the threat of job loss, overtime, etc. The deterioration of sentiment reinforces the adverse impact on consumption from decreasing disposable income. J. Katona connects the psychological mechanism of overcoming the crisis with the fact that the part of households, whose income did not decrease significantly, perceive this fact as personal success in the struggle against difficulties and begin to look into the future with optimism.

The modern authors **J. Akerlof and R. Schiller** link the fundamental instability of the market economy with the constantly changing influence of the human factor, which is irrational.

Every day a person makes a choice among several alternatives, and everyone in principle is able to assess the possible consequences of such decisions. However, psychological frames have a strong influence on practical decisions to spend or put away money. The "framing effect or the framing effect, means that when a person is faced with a decision between identical problems, but one of them is described positively, and the other is described negatively, the decision may have the opposite character. People respond to different signals and contexts. Some experimental studies show that the presence of credit cards causes oniomania, neurotic dependence in consumers, and is associated only with purchases.

Psychological features of consumer choice. The complexity of consumer decisions in today's environment is due to:

1) market failures, asymmetry of information and consumer costs;

2) changes in the criteria of rationality of consumer choice;

3) strengthening of subjective factors in consumer decisions.

With the introduction of new technologies the abundance of information about goods and services creates a dual situation for the consumer, realizing his choice in the market. On the one hand, there is wider access to a huge amount of information, which increases the probability of getting the most important and relevant information. On the other hand, the process of search and choice of useful information from the big information flow becomes more complicated. As a result, there is a phenomenon of informatization of consumption, which is understood as the mediation of consumption of goods by informational activities. Information becomes the basis of decision-making by consumers.

Consumer information activity can be divided into two stages: the first is the stage of collecting and processing information; the second is the decision-making process. The causal link between behavior and external conditions is not absolute, but manifests itself as a tendency, as a form of regularity. Indeed, at the heart of personality is the desire to freely determine one's behavior. In this sense intellectual and practical activity from the position of personality is unique and inimitable. However, in information economy with high level of uncertainty the freedom of economic behavior of subjects is significantly limited due to market failures, incompleteness and asymmetry of information and other more objective reasons: low income, high prices, unbalanced supply and demand, etc.

Consumers need systematic and timely information about products, prices, discounts, promotions, places where goods and services are sold, etc. To get this information consumers spend their resources – economic, time and cognitive. When analyzing the process of collecting and processing information, it is important to consider not only the availability of information, but also a person's ability to comprehend it. A lot of information is not always better for the consumer.

Rationality ranking theory assumes that the unconscious and the unconscious in humans confront each other. All types of economic behavior P. Reynaud ranks according to the level of mental energy expenditure. The more consciously rational behavior is, the more expenditures of energy are required and the less willingly economic subjects behave. Quasi-rational forms of behavior, i.e. "episodically conscious behavior"of consumers are typical for this situation. The transition from one type of behavior to another is made by leaps and bounds through "thresholds"that are subdivided into the thresholds of breakup and thresholds of adaptation according to intensity of the subsequent change.

Ambiguous manifestation of the need, the possibility of different approaches to solving the problem generates the problem of choice. As it is known choice is the most essential component of any decision, limiting variety. In the process of decision making consumers correlate unsatisfied needs with their own solvent capacity. In this case the second stage of intellectual activity can be represented as an algorithm for choosing a satisfactory solution, which includes a set of certain rules:

- disjunctive rule involves selecting the option with the highest level of one, the most important characteristic;

- conjunctive – the variant exceeding a satisfactory level on all characteristics is chosen;

- the rule of consecutive discarding – each variant not satisfying an acceptable level of any, the first encountered characteristic is deleted;

- lexicographic – variants are compared in pairs, first by the most important criterion, then by the next most important one, etc.

As a result of intellectual process the most acceptable decision variant is chosen; relatively important needs that need immediate satisfaction motivate subject to make a decision in favor of consumption; less important needs that can be postponed in time thereby motivate decision about savings and will be satisfied in the future.

5.2 Influence of information cascades on consumer behavior. The latest trends in consumer behavior in the market

With the development of the Internet the tendencies to form such phenomena as word of mouth, herd behavior, information cascades and network externalities are increasing in the field of consumer interaction. Word of mouth has always played an important role in consumer decision-making about the purchase and is one of the most influential information resources.

However, its effectiveness is limited by the framework of social contacts and tends to decrease over time and the growing remoteness of subjects from each other. With the development of information-communication technologies and online electronic social networks, information becomes accessible to the whole network community, and at high speed. Online radio is beginning to play an increasingly important role in consumer decision-making.

Researchers found out that information exchange leads to growth of sales, which promotes more intensive information exchange, i.e. these processes strengthen each other. Thus, network externalities have social, economic and commercial effects. The intensive growth of social networks and multimedia sites has significantly affected consumer behavior. If at the initial stage, they were used mainly by young people, nowadays it is difficult to do without them for mass consumer. Social networks are becoming a global phenomenon, transcending national and regional borders.

Information technology is capable of strengthening herd behavior. **Herd behavior phenomenon** means that decision making process concerning individual's consumer choice is significantly influenced by decisions of other persons. The reasons for its appearance are related to information asymmetry in decision making, as well as attractiveness of membership in a certain group (or obligatory, for example, in the case of individual family) and presence of authoritarian leader in the group, whose opinion is accepted to be listened to. The most pronounced forms of herd behavior manifestation are information cascades.

According to information cascades theory the optimal behavior of an individual after learning the actions of predecessors is copying someone else's behavior without taking into account information at his/her disposal.

Information cascades mean a complexly structured directed flow of information to the consumer in order to stimulate sales. It is possible to distinguish the following reasons for the appearance of information cascades:

- The need to solve single-type tasks;
- A joint effort and the desire to simplify the decision-making process;
- imitation behavior.

Information cascades occur when a consumer who makes a decision has no reliable information about the real value of the product (there may be too little or too much information), then he tries to determine it by watching the actions of other people. Mechanism of information cascades spreads due to signals coming from external environment. As a result, consumer choice is made under the influence of others' buying decisions and exceeds the influence of the information that was at their own disposal. Thus, information cascades explain herd behavior phenomenon.

However, herd behavior theory removes assumptions about independence of consumer choice. The consequence of interdependence of utilities is **imitation behavior,** which is deeply researched in the framework of evolutional theory of demand. Individual consumers can imitate behavior of other individuals who made a decision in favor of uncertainty reduction or gaining social status. The final result of individual choice depends on interaction of different consumers. Thus the positive effect of imitation behavior is that the time for obtaining additional information about a product and the amount of learning, necessary for the purchase of certain goods is reduced.

An interesting analysis of interpersonal effects in consumer behavior was conducted by M. Granvetter and R. Sung. The scientists found that imitation behavior leads to the effects of **"mass entrainment"** and the opposite to them. In the first case, the correlation between individual purchases and the rest of the community is positive. Before purchasing a new good, consumers wait for a certain percentage (lower threshold, X) of other more advanced consumers to do so. After that, demand for the good begins to rise sharply (see figure 4.2).

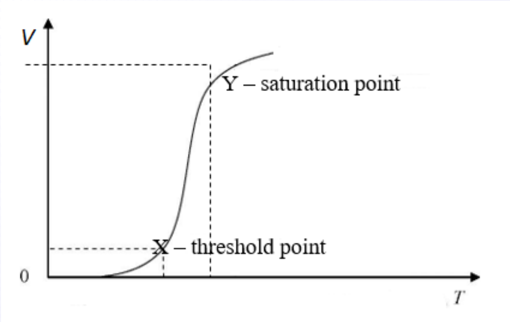

Figure 4.2 – Market appearance of a new good

Such curves mean that when there is an income level, which makes it possible to consume this good, demand for it will grow at first, increasing rate, until it reaches saturation point (Y). At the same time the acceptance of a new good occurs slowly at first, then speeds up and finally slows down as it approaches saturation.

In the second option, goods and services are bought mainly because of social status. In this regard, when the number of consumers exceeds a certain percentage, those who seek higher status stop buying this product. The result of this process is a complex behavior, which does not always fit into the framework of the classical demand curve.

The bandwagon effect describes a psychological phenomenon in which people tend to make decisions or form opinions based on their widespread popularity rather than independent analysis. The effect occurs when individuals, observing the popularity of a product, idea, or behavior, unconsciously begin to consider it more attractive or correct simply because many others have already made the same choice. In economics, this behavior is explained by a combination of social proof (if many people choose something, then it is rational) and the fear of missing out (FOMO), which is especially noticeable in the sphere of consumer goods, financial markets, and fashion trends. For example, the excitement about new technological gadgets or cryptocurrencies is often fueled not so much by their objective characteristics, but by people's desire to "be part of the trend."

The mechanism of this effect is based on deep socio-psychological processes. On the one hand, people are evolutionarily programmed to seek safety in group behavior - following the majority reduces the cognitive load when making decisions and minimizes potential social risks. On the other hand, an information cascade amplifies the effect: when early adopters create the appearance of popularity, subsequent participants make decisions based not on the initial data, but on the actions of their predecessors. In financial markets, this leads to the formation of "bubbles", when asset prices rise solely due to the influx of new investors who believe in the continuation of the trend, and not in the fundamental value. Similarly, in politics or fashion, a "craze" can artificially inflate the significance of individual phenomena, creating short-term irrational trends.

The practical consequences of the effect are multifaceted. In marketing, it is deliberately exploited through "word of mouth" strategies, creating artificial scarcity, or demonstrating the popularity of a product ("1 million units purchased"). In economic policy, it is important to consider that such collective patterns can distort real supply and demand, requiring regulatory measures - for example, "cooling off periods" for major financial decisions. Critical-thinking consumers and investors can counter the effect by asking themselves: "Would I choose this if no one else was doing it?" However, it is difficult to completely avoid its influence, as it affects the basic mechanisms of social learning. In the digital age, the effect is amplified by social media algorithms that create the illusion of widespread popularity of individual trends, which requires the development of media literacy as a tool for conscious consumption.

Researchers make the following conclusion: demand formation requires learning; learning can take place through different mechanisms, one of which is **imitation behavior,** which reduces uncertainty, connects utility and choice functions of different consumers and leads to formation of sigmoid curves of new goods distribution.

Thus, imitation behavior on the one hand allows speeding up consumer education, on the other, it is the consumers' reaction to the mechanism of new consumer practices transmission, used by innovators.

According to I.A. Strelets, herd behavior can also be rational and irrational. In the first case a rational consumer makes decisions competently, taking into account information received from other persons. Irrational behavior occurs when consumer does not take into account or ignores available information and completely relies on other people's actions.

Apart from information cascades, herd behavior has other forms of manifestation: **network effects, sanctions for deviant behavior, preference of conformism etc.** In this case, they work as a signaling mechanism. Positive network effects and information cascades are complementary and can complement each other. When the product creates positive externalities, the herd behavior, which is formed under the influence of informational cascades, will be strengthened by network effects, which will lead to increase in the number of buyers and demand for the given product. It is important for new products and services which can create positive external effects to penetrate the market at the earliest possible stage in order to take advantage of the influence of information cascades. Thus, there is a strong complementary relationship between informational cascades and network effects in terms of their impact on consumer decision-making.

Information cascades are especially manifested and amplified in electronic communication: first, a huge flow of information in the network is transformed into an information avalanche and collapses on the user, who finds it difficult to understand its correctness, as a result, the strategy of following others may be the most rational choice; second, digital channels provide information about products depending on the choice of other online buyers and rank them in order of maximum sales, which also facilitates consumer choice based on knowledge of other people's preferences; thirdly, if the buyer has comprehensive information about the product, he/she is less dependent on the opinions of others, in this regard it is important to direct the flow of personally addressed information. Information cascades tend to fade. Portion of new information or more informed buyers who make more rational decisions are able to stop the information cascade. So, information technologies make considerable modification of standard behavioral models of consumer choice.

Applied aspects of behavioral theory of consumption. Various factors influence the model of economic behavior of consumers, which is not limited to the impact of the economic parameters of disposable income, wealth or interest rate.

Many Americans believe that if you work hard, you can achieve great results. The flip side of workaholism is the ability to enjoy their hard-earned money. Leisure time turns into a consumer good and is considered as time necessary for the consumption of goods and services, becoming along with the work part of the economic system.

The famous scientist R. Istrelin deduced "paradox": with the growth of income and welfare the share of happy people is decreasing. Two reasons explain these trends: firstly, as society develops, luxury products become basic necessities (in particular, for consumer society). There is a dissatisfaction with the possession of the object, the suffering due to the inability to possess something becomes a common phenomenon; and secondly, more and more goods acquire positional status (better than that of neighbors, friends, relatives). In other words, individual utility depends on the ratio between the amount of goods owned by an individual and the goods owned by other members of the community. However, as T. Cohen puts it, it is impossible to create a hierarchical structure where everyone has to be at the top.

Studies of changes in economic behavior show that the most significant factors in the choice of consumption patterns are:

- personal self-identification;

- acquisition of social status;
- changes in lifestyle and style of life;
- turning the imaginary into reality through the purchase of brands.

In other words, through consumption a new social reality is constructed. Consumerism (overconsumption), brandism, shopaholism, conformism become signs of a new society.

The "demonstration effect"of consumption was discovered in the works of T. Veblen, in the model of relative income of J. Dusenberry, developed in the studies of H. Leibesian and associated with the influence on consumers of their social environment.

Studying the phenomenon of debt financing of consumption on the basis of canonical models of consumption function, American researchers F. Alvarez-Cuadrado and N. Van Long come to conclusion that only synthesis of the hypotheses called "relative income hypothesis as a version of permanent"allows to explain similar consumer behavior with overlapping generations, where the essential role is played by inheritance and potential income of the household during the whole life. The authors of the new version pretend to discover a "new fundamental psychological law,"the essence of which boils down to the following: the choice of consumption model depends not only on its own income, but also on the relative income of the typical representative of the reference group, which is equal to the consumption of the household. In contrast to the forward looking economic agent, there is a consumer in the model, looking to the sides.

Thus, given the above approaches, the following conclusions can be made: Firstly, it is necessary to admit that psychological peculiarities, motives and stimuli determine the orientation of economic behavior of subjects and, consequently, the model of consumption; Secondly, such subjective factors as tastes, habits, traditions, customs and instincts are stable and have a long stabilizing effect on the households' behavior connected with the income distribution for consumption and savings; thirdly, discrete psychological factors play the dominating role in consumption models in Russian reality: mass pessimistic moods, uncertainty in the future, uncertainty of the subject which cause deviations of consumer behavior; fourthly, recognition of irrationality of human behavior opens the way to search for actions in the sphere of financial or social policy that can correct irrationality and weaken its negative consequences for the person and society.

The newest tendencies of consumer behavior on the market. Due to changes in consumer market we can outline a number of key trends in consumer demand under new conditions.

One of the most significant trends in information economy is the intellectualization of economic activity, including consumer activity. The most important aspect is the increase in intellectual and informational saturation of goods and services, the processes of their promotion and purchase and sale.

In modern economy the majority of products become "smart things i.e. they contain a large amount of knowledge, complex intellectual technology, which allows to complicate and expand the functionality of goods. And intellectual "soft"component of the product as for its cost and consumer utility exceeds "hard"part. It concerns not only technically complicated and digital goods and services but covers many other more traditional sectors of the market. There is hi-tech furniture, smart clothes, molecular cosmetics and etc., which are able to take the required shape independently, ergonomically transform and fit to a definite consumer. Such traditional products as a house, a car, a telephone are saturated with intellect and knowledge to such an extent that they are able to replace functions that were previously performed by a human being on a more effective level. Intelligent, knowledge -intensive, knowledge -intensive, science -intensive goods and services (smart house or intelligent building, smart car, smart phone) are actively spreading in the market. Smart products of the new era include clothes with microprocessors, cards (credit cards, passes), houses, roads, cars, tires, navigators, sports goods, radios and televisions (built-in program-agent, advertising selection), telephone and other gadgets.

Indeed, in terms of engineering solutions, the modern car differs little from the "self-driving vehicle"prototypes. Their basic difference is in the volume of materialized knowledge and information: the last samples of automobile construction are equipped with on-board computers, in production composite materials and plastics not found in nature are used, the salons are equipped with air conditioners, cellular telephone equipment with access to Internet and so on. Even more information saturation has products of genetic engineering and biotechnology (for example, new varieties of cultivated plants and modern medicines), computer production, aerospace and telecommunications.

There is a dual trend in the new economy: on the one hand, there is a transformation of previously unique products into commonplace, mass-market products; on the other hand, there is a transformation of previously commonplace products into unique and tailored to a particular customer. There is a synthesis of goods, the creation of various products with unique (real or virtual) trading values (healthy food – food and medicine functions, eco-tourism, etc.).

Goods are becoming more and more complex, with more and more intelligence, information and knowledge invested in them, which is manifested in the informational saturation of markets. This is accompanied by increased innovation activity, which can only be based on a certain novelty of goods or services, constant adaptation to changing preferences and needs of specific buyers. Otherwise the goods will not be demanded in the market. Buying a new product, the consumer supports innovation. If he does not show interest to the innovation, denying a new product in demand, he does not recognize the direction of innovation, which is fraught with serious problems for business, up to bankruptcy.

Intellectual intensity of most material production goods and increase of cognitive component in the cost of goods will lead to cognitivization of goods, their transformation into "knowledge clots". There is a growth of goods discreteness and emergence of individually oriented goods. As a result, the price of such goods is determined mainly not by the cost of "iron but by the information, intellect and knowledge concentrated in them.

A somewhat different aspect of the intellectualization of goods is revealed by the fact that the "soft"component of goods is becoming not only larger, but also more important on the market. These processes are interconnected and indicate that an increase in information and intellectual saturation is becoming a market need, both from the side of producers and consumers.

The commodity as a subject of economic relations is becoming more and more divorced, losing its material shell and assigning it a secondary role. Goods are wrapped in intellectual and information support, and then realized in the general complex of support services. Images and services become the main representatives of the goods in market relations, and it is them that consumers pay attention to. Changes and differences of goods are both functional and informational, with the latter prevailing. In the functional-material relation identical products get additional advertising treatment by making changes to the package, various PR-campaigns, promotions, tastings, the publication of catalogs, advertising coupons, etc. The majority of modern goods and services have a symbolic value and not always have a material factual basis. Functional and material changes are mediated by informational component.

Saturation of basic needs of the population brings non-price competition to the forefront (design, style, innovation, image, quality), and the shortening product life cycle means accelerating innovation, which are becoming permanent, but not always accompanied by improvement of production forces and raising the quality of production factors.

Information includes the growing importance of the symbolic level of production, information in the form of experiences, meanings, and identities. Computers help to mediate this process. The creation of electronic symbols, sometimes called "content production,"is one of the main fields of the information economy. The ability to turn a technical device into a lifestyle tool gives companies market leadership. Consumers, by buying such a product, actually acquire a certain experience, meaning or identity. As a consequence, companies spend more and more time on creating a symbolic level of the product compared to the costs of purely technical improvements in the product.

It follows that in information economy there is an important trend – softization of consumer demand, which manifests itself in shifting accents from consumption of material, physical, monofunctional goods to consumption of multifunctional goods and services with a high degree of intellectual, cognitive and informational saturation, in which non-material component prevails over material one.

Another important trend, reflecting the diversification of consumer demand is consumption servicization, which involves the expansion of demand for a variety of services, the prevalence of intangible services, the emergence of new types of network, intellectual, information services, adequate to a higher level of information economy development.

Services differ greatly from usual goods: firstly, they are more heterogeneous, from rather primitive, which do not require much qualification, to extremely complex, requiring high consumer comptents; secondly, they are consumed, as a rule, at the moment of their provision, which means they cannot be accumulated; thirdly, a common feature of all services is time consumption, getting useful effect from services requires more time than consumption of simple material goods.

There is no unified approach to service classification in literature; however, two large groups of services can be distinguished: the first group is tangible (services related to human services, transportation, personal services etc.) and the second group is intangible services, which are quite heterogeneous in origin:

- intellectual services are based on knowledge, intellect as the ability to manage the process of recognition and processing of information;

- social services – are not of final nature, they are public goods;

- environmental services – provide utility for all, but no one wants to pay;

- creative services (entertainment, creative, advertising, design, illustration, video-visualization, creation of EE-objects, selection of domain names, scenarios for corporate events) are either free or expensive.

Today many companies focus not so much on production as on promotion and after-sales service. The lion's share of firm profit is formed not due to direct sales of goods, the price of which is constantly reducing under the influence of scientific and technological progress, but due to post-service. Thus, the first year of car warranty service costs the client 25% of its original cost. During approximately three-five years of such service the company receives actually double the cost of sold products.

In an information economy is greatly increasing demand for new types of services: intellectual (knowledge-intensive) and information services.

Researchers highlight the following specific characteristics of these goods:

- are intangible in nature;

- They are characterized by heterogeneity, heterogeneity and nonstandard products;

- contain high added value created by high-skilled labour;

- are invariant to space, quickly spread by means of electronic and digital communications;

- are accompanied by a pronounced asymmetry of information.

Specifics of the process of consumption of such services differs from the standard product, which determines the peculiarities of demand for them. The consumer acts as a co-producer of the service, investing his information resource into its creation. In other words, the process of consumption of intellectual service is in consumer's ability to perceive the knowledge included in it, which requires from consumer high intellectual potential and special information competence. Otherwise, the service will be useless.

Consequently, the ability to adapt in consumption is a limiting factor of demand for innovative goods. According to the opinion of M.E. Doroshenko, unlike the standard model, where the need for goods forms demand for it, the existence of need for an intellectual service does not make the economic entity the agent of demand. The emergence of demand for these products requires the combination of three conditions: need, ability to pay and ability to accept. Thus, the modern consumer should be highly competent, possessing significantly more knowledge, skills and abilities to consume new knowledge-intensive products.

Ecologization of consumer behavior. In the new economy the dynamics of needs in the direction of growth of social, spiritual, creative transforms structural shifts in the consumption of households and has a positive effect on the development of non-productive sphere of the economy, leads to a synergistic accumulation of human capital as a key factor in socio-economic development.

Ecologization of consumer activity is also becoming an integral part of global development. Ecologization of consumption implies consumers' orientation towards environmentally friendly and resource-saving consumption, environmentally friendly attitudes and reduction of consumer waste, which is reflected in ethical consumption. Ethical consumption is buying and using goods not only because they are useful for consumers, but also under the influence of moral values, refusal to buy goods and services that are harmful to nature and people. It is a peculiar reaction of consumers to environmental pollution, unsightly business behavior, expressed in opposition to these practices.

The researches conducted during the last two decades show that there is positive dynamics in evaluation criteria of consumer choice. For example, in the 1990s marketing research showed that there is a gap between the way consumers define the importance of ethical postulates and the extent to which in reality they are guided by them in making practical consumer choices. P. Ostergus's model considers such components of consumer choice as personal benefit, cost, personal value system, influence of public opinion, knowledge of possible negative consequences of purchase and trust in the brand. Based on the analysis of consumer choice the scientist came to the conclusion that personal benefit defeats normative attitudes.

In 2004 the study conducted by P. Ouger and T. Devinni showed that in developed countries the clusters of consumers for whom such criterion as biodegradability of packaging is critical start to be formed. However, the researchers find no direct correlation with such classical criteria as gender, age and income level. The only significant criterion influencing the greening of consumption was personal cooperation with an environmental

NGO or the work of acquaintances in it. On the basis of these studies, scientists hypothesize that ethical constructs are implemented faster when there is personal communication and dialogue than through mass media. However, there is a possibility that the volume of commercial advertising by the time research has not yet reached a critical point to really influence the process of consumer choice.

There is a constant desire for innovation in consumer behavior, indirectly related to progress, including the development of mass production and technology. Modern consumer wants to buy and renew a set of consumer goods all the time, even when it is contrary to rational notions of normal life. As a result European and Russian consumer consumes with very high speed and accordingly with the same intensity generates waste products in the form of waste.

Inconsistency between consumption cycles of average consumer and cycle of substances of average biogeocenosis becomes one of the factors negatively influencing the environment. As a counterbalance to this tendency, principles are put forward: reuse – use of old things and recycle – recycling of materials.

The important aspect of ecologization of consumption is connected with hygienic goods. Modern medicine has designed its messages mainly on the mechanism of phobia provocation and propaganda of sterility as a panacea against complications. Consumers have developed fear of any microorganisms, despite the fact that most microorganisms are nonpathogenic and form an important layer of any ecosystem, including the internal environment of the human body. There are some attempts to justify bacteria in advertising – for example, "useful bacteria"in yogurt, but these attempts are mixed and are not based on integral ethical conception, so they do not take completely away phobia before unhygienic goods.

As a result, consumers prefer products which are individually packed in polyethylene film or sterilized by industrial means. Such problem is aggravated by single use, miniaturization of goods. This hygienic consumption creates an additional layer of consumer waste, without which most cultures, different from the culture of the consumer society, have been able to do without. To solve this problem in the framework of ecological consumption the following principles are proposed: reduce – reduction of packaging and reuse – use of used packaging.

In modern conditions a critical approach to consumption is being formed, which reflects new trends in consumption – anti-consumerist practices, "ethical "green"consumption, "slow"consumption, boycotts of goods, the growing popularity of recycling, handmade, etc. Different agents – the state, corporations, social groups and individuals – use the critical potential of consumption. For example, the state wages "trade wars"with other countries, restricting imports of goods produced there. Corporations that produce consumer goods are forced to maintain the principle of corporate social responsibility under the pressure of public demand. There are ecological offices and institutions, of which there are about 200 in Russia, including 80 in Moscow, that use recycling of nonreproducible resources and energy-saving technologies.

Multifarious group and individual strategies include boycotts of consumer goods (anti-globalization boycott of McDonalds), protest marches (against the use of fur in St. Petersburg) and others. Old practices of recycling (for example, "eco-mobiles"– mobile points for collecting hazardous waste – are functioning in several Russian cities) and reuse of things (so-called «flea markets», charity stores) are coming back and new ones are appearing. Criticism of consumerism, glamour, and demonstrative consumption occupies an important place in media discourse and popular culture (movies "Gloss "SpiritLess etc.).

The economic literature offers several approaches to address the issues of ecologization of consumer behavior. The first approach is based on market strategy, which proposes to solve problems by charging more for the use of natural resources (water, energy), the choice of transportation, waste disposal and through economic incentives for the transition to "green"consumption patterns. The second approach considers consumption as an element of the concept of sustainable development, where optimization involves a level of consumption in the present that does not impede sufficient consumption in the future. The third approach assumes a quantitative reduction in consumption as a way to conserve nature, the elimination of the morality of the consumer society, the desire to maintain a healthy lifestyle and reduce overconsumption.

Thus, the release of environmentally clean products and products with high added functional utility can promote innovation-oriented behavior and new thinking of consumers.

Aestheticization of consumer behavior. Consumption aesthetization is about creative approach to the choice of consumer goods, blurring the border between art and everyday life and is expressed in creative consumption.

According to the English researcher M. Featherstone, the most important feature, characterizing the new society, is a huge influence of aestheticization of human life on consumerism peculiarities. The reason for this phenomenon is its dual transformation: firstly, the objects of daily life are transformed into artistic objects (for example, art-house); secondly, ordinary consumers try to make their everyday life into a esthetic project, choosing by desire a certain style in clothing, appearance, home environment (Gothic, high-tech, Art Nouveau, etc.). These processes are associated not only with the production of aesthetic products, but also with an increase in the sign value or image component contained in the material goods. Hence, the designer's contribution to the creation of product value is increasing, especially manifested in durable goods, which create the micro environment of human life. Through the mechanism of branding things are endowed with the properties of signs, and consumers take on the role of agents of aestheticization and branding. S. Miles in his study also notes that the reason for intensive development of design is associated with the desire of the consumer to self-actualize, to self-actualize by means of consumption.

Modern society, in the work of S. Lash, D. Urry, is interpreted as a society of flows of signs, images, information and aesthetic reflexivity. The authors note that structures are replaced by flows, at the same time there is an increase in human reflexivity in relation to the surrounding world, which manifests itself in the following forms: 1) esothetic, associated with self-identification, self-interpretation of social practices through evaluations and emotions; 2) cognitive, performing the function of self-monitoring and comparing social and structural roles through cognition and reason. Social structures are replaced by informational and communicative structures, which are network flows. Structured flows and the accumulation of images, symbols and signs are a condition for aesthetic reflexivity, while information flows are a condition for cognitive reflexivity.

The increasing role of aestheticization of consumption is connected with increasing consumer choice in accordance with individualization of tastes and preferences, with personal identification, with increasing importance of time in consumption and accumulation of cultural capital, with increasing mobility of consumers, especially recreational goods, with the emergence of a network of new objects and subjects of post-consumer infrastructure related to aesthetics.

Researchers allocate some tendencies of aestheticization of consumption:

- Commodification is a systematic process of objectification, extrapolation of consumer mechanism to previously non-market areas or conversion of goods that were not commodities to commercial goods, which can be freely exchanged in the market and acquire monetary expression. Sports, politics, art, army, medicine, education, sexual relations and even human body (formation of human organs market) became the objects of modern consumption.

- Co-optation is the socio-economic system's attitude to the external and symbolic, the rapid spread of signs and images in modern society, their manipulation, the creation of an illusory world that constructs real life.

- The compatibilism of everyday life, work, the natural and social environment, the guarantee of health, education, and human rights. This trend includes technotization of everyday life, miniaturization of goods, widespread disposable tableware, avalanche-like growth of consumer services associated with the signs of comfortable life.

- Culturalization of consumption, which finds its expression in new consumer practices, where lifestyle is subordinated to the aesthetic project, and everyday life becomes an art field.

The identified trends affect the preferences of the consumer, who, as M. Roschina said, no longer perceives "high art"as something refined, closed, available only to the upper strata of society and builds it into the everyday consumer activity. The modern consumer chooses among a variety of goods those that fit into his or her personally constructed aesthetic standards, which increases individual utility by taking an additional consumer surplus in the form of artistic and aesthetic bonus. These phenomena and processes need to be taken into account when promoting new products on the markets and creating their advertising images.

Behavioural consumer theory reveals the complex nature of consumer decisions, demonstrating that consumer choices are determined not only by rational calculations, but also by deep psychological mechanisms. Analysis of key concepts - from mental accounting and emotional drivers to social comparison effects - reveals systematic deviations from the rational actor model. These patterns are especially pronounced under conditions of uncertainty, when consumers rely on simplified heuristics and are influenced by collective sentiments, which is reflected in the subjective psychological concept of economic cycles.

Thus, research into the psychological characteristics of consumer behaviour reveals the important role of cognitive biases and social factors. The effects of information cascades and "bandwagons"demonstrate how individual decisions are shaped by the perceived mass choice, often contrary to objective data. Practical application of this knowledge in marketing and economic policy allows us to develop more effective tools for interacting with consumers - from choice architecture to transparent communication strategies that take into account real decision-making mechanisms.

Modern trends in consumer behavior reflect the increasing complexity of the motivational structure — the growing importance of environmental and aesthetic factors in choice. Greening of consumption is manifested in the willingness to overpay for sustainable products, while aestheticization leads to an increase in the importance of design and emotional experience. These changes require new approaches from businesses and regulators that combine behavioral insights with the technological capabilities of the digital age. Understanding the described patterns creates the basis for predicting consumer trends and developing responsible strategies for market interaction.

6 BEHAVIORAL FINANCE

Behavioral finance. The economic and psychological essence of money. Attitude to money as a criterion of comparative ways of behavior of economic subjects. A typology of "money"behavior. Macroeconomic studies of the psychology of money. The model of overlapping generations. Applied aspects of behavioral finance.

6.1 Behavioral finance. The economic and psychological nature of money

Modern finance is no longer a purely mathematical discipline, increasingly turning to psychology to explain the real behavior of people in financial markets. Behavioral finance is an interdisciplinary field that studies how cognitive biases, emotional reactions, and social factors influence financial decision making. This field of knowledge has moved away from the traditional notion of a rational economic agent, demonstrating that even professional investors and traders often act under the influence of fear, greed, or herd instinct, which leads to systematic deviations from an efficient market.

Money, as a central category of finance, has a dual nature - economic and psychological. On the objective side, money is a tool for exchange, measurement of value, and accumulation of wealth. However, a psychological perspective reveals its deeper role as a social construct endowed with subjective meanings and emotional associations. Research shows that people do not perceive money neutrally – different amounts and forms of money (cash, non-cash, cryptocurrency) activate different psychological reactions and behavior patterns. For example, electronic payments are perceived as less "real which can lead to less responsible spending.

The combination of these two perspectives – behavioral finance and the psychology of money - allows us to understand many financial phenomena in a new way. Attitude to risk, the propensity to save or make impulsive purchases, the perception of debt and investment are closely related to deep psychological attitudes and social norms. This knowledge finds practical application in the design of financial products, regulatory policy and financial education, helping to create more effective tools for interaction between the economic system and real people with their complex behavioral patterns.

One of the features of the modern approach is that the psychological analysis of the system of income and savings modern economists seek to link with the study of the category "money"– the primary basis of the concepts of "income"and "savings".

Money as a medium of circulation is one of the common forms of money. Means of circulation is literally a mediating thing used in the process of exchanging one good for another. The use of money as a means of exchange in transactions of purchase and sale makes the process of exchange more efficient.

Money also exists as a means of saving. If money is accepted as an exchange and payment, it can be a means of saving, or accumulation of value. Of course, not only money can be a savings tool. It can be any real estate, stocks, collections, etc. But money is the most liquid asset that can be always exchanged for any goods and securities. Any other asset must be firstly exchanged for money (sometimes with losses or taxes on transactions, etc.), and only then for the needed goods.

Along with the economic role of money as a universal means of exchange and a commodity equivalent, the essence of money is reflected in extra-economic sphere, in the sphere of relations with mankind. This is where the psychological side of money impact on life processes is seen more clearly. In modern society money is increasingly becoming a means of raising people, an instrument of power, an indicator of social status and a source of popularity, it is a source of envy, reverence, focus of evil and violence and a way of doing charity.

Among the established approaches to **psychological evaluation of monetary instrument** it is accepted to distinguish four relatively independent variants:

- *Interpretation of money in terms of its perception at different stages of human life.*

- *Psychoanalytic interpretation of money as a kind of waste from functioning of economic organism.*

- Consideration of money as a symbolic means of exchange.

- Characterization of money phenomenon on the basis of one of the accepted in psychology approaches related to learning effect.

Among these variants the most interesting is the last one. According to this position money acts as common stimulating factor for human as some common need. At the same time it (unlike natural and biological needs) is of secondary nature because people have to learn it. Its special characteristics are manifested in its ability to cover all other needs. With money people can satisfy most of their natural, primary needs and wants (food, protection, security) and also a wide range of secondary needs related to cultural, sociological and other demands (for example, needs for recognition, success, power etc.).

In essence, satisfaction of demand for money creates an opportunity to realize the majority of desires and demands systematized by American social psychologist A. Maslow in the form of "pyramid of needs". In the framework of this graphical structure, money can also appear as one of the slices of needs. At the same time, the universality of this type of desires consists in the possibility of one-temporal solutions in relation to other human needs. However there is an interesting psychological detail. When money helps a person to meet one need, it automatically reinforces another: the need for the "yellow metal"itself. This process is intertwined with the notion of personal independence. So, one of the typical needs of a person is his/her feeling of security. For example, he can create for himself a situation of his security on a paid basis. However, in this case, independence from some circumstances is obtained at the cost of increasing dependence on others, i.e. on money.

Thus, money in the modern world has found, along with its original, natural financial essence, and the second, representative, in fact, purely psychological, essence as an exponent of the image of the owner of monetary wealth, confirmation of this image.

Attitude to money as a criterion of comparative ways of behavior of economic subjects. Attitudes toward money serve as an important criterion for analyzing and comparing behavior patterns of various economic entities – from individual consumers to large corporations and government institutions. This attitude is formed under the influence of a complex interaction of objective economic conditions and subjective psychological factors, including personal experience, cultural norms, level of financial literacy, and individual value orientations. For example, for some, money may primarily represent an instrument of security and stability, which manifests itself in conservative financial strategies, while others perceive it as a means of self-realization or social positioning, which leads to riskier consumption and investment models. Such differences explain why, under the same macroeconomic conditions, entities demonstrate fundamentally different financial behavior.

A comparative analysis of attitudes toward money allows us to identify stable behavioral types. At the individual level, we can observe opposing strategies – from pathological thriftiness to compulsive spending, from careful financial planning to a complete lack of long-term monetary strategies. At the institutional level, companies differ in their monetary policy: some accumulate significant cash reserves, demonstrating aversion to risk, while others prefer aggressive investment of available funds. These differences are rooted not only in rational economic calculations, but also in organizational culture, historical experience, and even personal characteristics of top management. Cross-cultural comparisons are especially indicative, where the attitude to money reflects the deep values of society - for example, the opposition of "Protestant"thrift and "prestigious"consumption in various social contexts.

The practical significance of studying monetary relations as a behavioral criterion is manifested in several areas. In marketing, it helps to segment consumers not only by demographic, but also by psychographic characteristics, creating more accurate offers for different types. In corporate management, understanding the monetary attitudes of key stakeholders allows us to predict their reaction to the company's financial decisions. At the macro level, this knowledge is used to design more effective financial policies and educational programs that take into account real, rather than hypothetical, behavior patterns of economic agents. Modern research in this area increasingly uses experimental methods and neuroeconomic approaches, which allows us to move from superficial observations to an analysis of the underlying mechanisms of the formation of monetary attitudes and their impact on economic activity.

The revealed specificity of the attitude to money allows us to differentiate these relations at the level of values, needs and their satisfaction, motives of money use and social settings.

Features of attitudes to money of different people can be used for social standardization and social planning, for the correction of attitudes to money and forecasting consumer behavior, in the development of new psychological and didactic forms of education, in individual psychological consulting. The received results will be demanded in activity of financial organizations such as banks, insurance and investment companies and also any enterprises at studying and management of consumer behavior.

Absolutization of money measures and excessive trust in their veracity and objectivity is psychologically typical for many people. Set price, indicated in price lists, supported by arguments of sellers, officials, ostentatious calculations, becomes "true"for such people, which is beyond doubt. Although almost every reasonable person has his/her own understanding of value, utility, quality of things, and at the same time their relative monetary value; publicly mentioned prices, values in this or that monetary expression fascinate people, psychologically adjust them on perception of this or that monetary measurement as true, correct, true.

Less often we observe the opposite picture, when people, psychologically inclined to distrust, always doubting, tend to consider all the prices (except for those at which they sell the goods themselves) overstated, robbery. This to a certain extent applies to the price (level of payment) of labor, cash benefits, taxes and fees.

Psychologically conditioned people's distrust of money, born of instability of money as a value, leads to periodically observed aspirations to turn money savings in material-material values as psychological regulators of economic behavior.

With the development, strengthening, expanding the zone of market methods of economic management there is a penetration of money in a variety of areas of life, activities, relationships between people, including those where it is quite possible, and even necessary to do without money. In this case, the value is understood not only as an economic category, as value, but also as a social category, as a sign of respect, recognition and role in society. At the same time money becomes the most powerful potential in people's perception, the means of achieving any goals and solving any problems.

There is an **illusion of money omnipotence,** which in too many cases becomes reality. Money gets an image of universal idol, the most desired acquisition and criterion of welfare, acting as an object of general lust. The institutions of law, order, honor, morality, religion, and even state power have become increasingly difficult to resist the institution of money, which claims to be the supreme power and the leading force in the world.

An attitude of human being to money and money behavior is significantly influenced by age peculiarities, national stereotypes, income level, property and social status, worked out psychological attitude, following the example of others, the degree of respect to money as a result of labor, activity, efforts, energy and time.

Psychologically there is a difference between easy and very caring attitude of people to money. An easy attitude is manifested in the fact that people do not give money a defining role in life, freely spend available money, do not show special concern about the channels of money, do not seek to accumulate money as an end in itself.

People who have an extremely easy attitude to money often turn into wasters, or even into wasters in life, but at the same time they are not burdened with an excessive burden of care about money, especially since there is sometimes nothing to care about. Money, indeed, is fun for them. These types of people are psychologically inclined to borrow money and are not always in a hurry to pay it back. Interestingly enough, the easy attitude towards money is typical not only for individuals and families, but also for entrepreneurs, firms, organizations, and even regions and nations. A caring, responsible attitude to money consists in respect for it as a means of payment and the result of labor.

The cost of the money is high. This implies prudence, frugality, forecasting and planning of income and expenses, reserving money, striving to strengthen the financial situation, limiting expenses on the basis of monetary possibilities. Carefulness means paying attention to the sources of income and channels of spending, compliance, balance of income and expenses, periodic accounting and control of funds, anticipating changes in their status, at least in the near future.

Typology of "money"behavior. Based on experimental and laboratory research we have developed a classification of money complexes and identified the following five "money"types of personality.

"Scrooge" hoards money, which in itself is fascinating to him. He often experiences fear of losing (money, things, supplies, resources, funds) and fear of being distrusted by others. The scrooge feels pleasure not from money as a good, but from the protection with money.

"Spender" demonstrates compulsive (obsessive) and uncontrollable behavior in relation to his expenses, especially in moments of depression, feelings of insignificance and feelings of rejection. Spending is his short-lived outlet, which eventually leads to feelings of guilt.

"Money-bag" is completely captured by making money, which is seen as the best way to achieve powerful status and the approval of others. He is convinced that the more money he has, the greater his ability to control the world around him and the happier he will be.

"The bargain hunter" obsessively goes after cheap stuff, even if he doesn't need it, because getting things for less provides him with a sense of superiority. He feels annoyed and depressed if he has to pay the asking price.

"The gambler" feels invigorated and optimistic when accepting calls. The feeling of power, which brings winning and its expectation, compensates the risks of losing, and the stoppage in the chain of defeats and victories is perceived as a life difficulty.

The features of the attitude to money and "money"behavior revealed in the clinical material are also presented in norm in the form of excessive amplification or accentuations of its separate characteristic features that testifies to selective vulnerability of the personality to certain kinds of psychogenic influences with good tolerance to others. Thus, adequate attitude to money and behavior is not always demonstrated in the norm, it may be exaggerated, accentuated. The described accentuations of "money"personality type are manifested in different contexts of interpersonal communication, primarily in family relations, as well as in business relations between people at work.

6.2 Macroeconomic studies of money psychology. Model of overlapping generations. Applied aspects of behavioral finance

Money likes account, that is why responsible, careful attitude to it requires drawing up and keeping personal and family budget for a certain period of time, mainly for a week, month, with allocation of especially large, single-moment expenses. Consumer budget of the family provides the allocation of the main items of expenditure during the budget period, bringing together expenditures with income, taking into account the amounts allocated for savings.

Nevertheless, there are some examples of macroeconomic studies made by psychologists. For example, R. Lynn's research showed in 43 countries that the value of money for the population is closely related to economic growth, i.e. the importance of money in people's life stimulates their economic activity and economic progress.

Another study by J. Hitchcock and R. Munroe compared average per capita income in 84 countries and the average amount of money in a country. Statistically reliable result of correlation analysis was that countries with smallest income had bigger banknotes and coins; it seems to be the compensatory mechanism of inferiority complex in the country. Inferiority complex is the feeling of own inferiority which, being unpleasant, is displaced into unconsciousness and compensated by activity on achievement of different successes (real and imaginary). **The substantial attribute** – lack of wealth – was compensated by a formal attribute (imaginary success) – the size of the banknote.

Macroeconomic discrediting of money leads to the following psychological consequences: 1) hypertrophied belief in financial games, chance, financial luck, instant enrichment; 2) minimization of the stabilization component of money leads to excessive consumer activity (money should be spent now), reduced financial self-control of the economic.

The negative components of attitudes towards money are manifested by a lack of trust in one's monetary unit, reduction of its auto-rituality and the reflection of the ruble's dependence on the dollar.

Negative components of the attitude to money are distrust of its monetary unit, reduction of its auto-ratio, the reflection of the ruble's dependence on the dollar.

Behaviorist theories concerned how money becomes a conditional reinforcement. First of all, it is studies on animals and experiments on humans in the clinic. Rats and primates quickly learned to respond to chips or other incentives that could be exchanged for any food, thereby modeling the function of money. Similarities in the behavior of animals and humans working for money allowed B. Skinner argued that money is only a generalized conditional reinforcement associated with a multitude of goods and services that can serve as unconditional reinforcement.

Cognitivists sought to identify the thinking mechanisms of money behavior, and **developmentalists** (developmentalism – developmental theory) emphasized the stages of development of money perception and attitude.

Another study looked at some of the neuroses associated with behaviors such as paying taxes, making a will, saving, and using credit cards.

Overlapping generations model. The overlapping generations model is an important tool in economic analysis that takes into account the interaction of different age groups in the economy. This model was developed as an alternative to traditional representative agent models, allowing for the study of long-term economic processes taking into account differences in the behavior of younger and older generations. The model is based on the idea that at any given time, several generations coexist in the economy, differing in their economic opportunities, preferences, and behavioral strategies. Younger generations tend to focus on obtaining education and accumulating human capital, while older generations are more concerned with preserving accumulated assets and pension provision.

A feature of the overlapping generations model is its ability to analyze intergenerational transfers and long-term effects of economic policy. The model demonstrates how the decisions of one generation affect economic conditions for subsequent generations, which is especially important in studying pension systems, public debt, and environmental sustainability. For example, current decisions on government borrowing create obligations for future taxpayers, and externalities from current production can worsen the living conditions of future generations. The model also takes into account demographic changes such as population ageing, which allows us to predict their impact on the labor market, the social security system, and macroeconomic stability.

The practical application of the overlapping generations model covers a wide range of economic issues. In the field of pension reform, the model helps to assess the consequences of the transition from a distributive to a funded system, taking into account the interests of different generations. In fiscal policy, the model is used to analyze the long-term consequences of budget deficits and public debt. In ecological economics, the model allows us to study the intergenerational aspects of climate change and sustainable development. The model is further developed by integrating behavioral factors, such as differences in risk appetite between generations, and institutional features, including the specifics of different pension systems. This makes the overlapping generations model a powerful tool for analyzing complex long-term economic processes, taking into account the real diversity of economic agents.

According to the overlapping generations model, the aggregate savings dynamism of an economy is determined by the balance of savings and spending averaged across the population as a whole. In an economy with a stable ratio between the young and the old, with no growth in national income per capita and no population growth, the savings of the younger generation are offset by the expenditures of the older generation. In this case, even if young generation is saving for retirement period, total savings in economy are equal to zero, as elderly people spend money at the same pace.

Most national economies have positive population growth rates and increase in national income per capita based on technological changes from generation to generation. Thus, each successive generation is more numerous and richer than the previous one. In the aggregate, the accumulation of savings of young households exceeds the expenditures of the elderly, and the economy as a whole demonstrates a positive dynamics. Economies with fast-growing populations tend to have higher savings rates due to favorable demographics. However, even assuming that households distribute their savings over the life cycle in the same way, the aggregate level of savings can vary significantly between countries due to unequal rates of population growth or different technological changes. J. Sachs and F. Larrain conclude that the conclusions obtained within the framework of the model of overlapping generations do not allow to fully explain the gap in the levels of aggregate savings in different countries.

The empirical verification of consumption models allowed us to find a non-monotone dependence of the savings level on the age of the head of the household, which reflects the U-shaped form of the savings curve during the life cycle. Households of young and pre-pensioners have a higher propensity to save and, as a consequence, larger savings. Most households at the peak of labor activity, 30-50 years old, have low or negative savings. It is possible to conclude from this that it is impossible to explain Russian consumer behavior completely on the basis of life cycle and permanent income hypothesis.

Foreign researchers think that such behavior is caused by low level of trust to the banking system, the households do not have confidence in savings till the old age and there are no effective instruments of stimulation of savings. In this connection, in the middle of the life cycle, having reached a certain level of material well-being, households switch over to consumption.

Such trends in the behavior of Russian households can be explained by the following reasons:

- When they are young, most households have a low level of economic well-being: the lack of their own housing and a number of durable goods forces them to make significant savings to meet these needs.

- In the active phase of labor activity the growth of needs outstrips the growth of income, a budget deficit is formed, which is covered by loans.

- In old age the needs are reduced, which leads to a decrease in consumption and an increase in savings. The motives of elderly people's savings are varied: from precautionary savings to passing on their inheritance.

There is no common opinion in economic literature about motives for leaving an inheritance. Of particular interest is the modification of the life cycle hypothesis by R. Barro. The author argues that current consumption may depend on the expected income of the next generation. If households, guided by altruistic motives, receive information about possible deterioration of economic prospects, they can decide to increase the size of inheritance in order to compensate possible losses of their children.

P. Barro showed that a household can choose such a budget constraint, which will take into account the aggregate income not only of today, but also of future generations. This theory largely explains the Russian practice, when most of the economic wealth, including savings, is inherited. The empirical research of L. Kotlikoff and L. Summers also showed that the greater part of wealth in the United States arose as a result of inheritance, rather than savings made during the life cycle.

Integration of the Russian economy into the global information society allowed:

- rapidly overcome the commodity deficit on the market of goods (the average market saturation rate is 86%), significantly renewed the product range, and increased the share of dynamic consumer goods;

- To expand significantly the range of banking and financial services for individuals, significantly improve trade and banking infrastructure;

- To quickly master new standards of consumption which correspond to high standards of developed countries;

- To increase the income and welfare of the population during the last ten years;

- at the same time grow consumer debt relative to disposable income.

The choice of the consumption model depends not only on the level of wealth of the potential agent, but also on his habitual financial behavior. As American practice shows, the credit model of consumption can have a positive impact during the life cycle of not more than one generation. The point is that it was possible to increase household consumption by increasing debt for a quarter of a century without a significant growth of their real disposable income. It became possible due to permanent growth of prices on pledged assets and maintenance of high level of general liquidity in the economy on the background of permanent reduction of credit cost. However, in the future it will lead to negative shifts in the economic welfare of the whole society due to insufficient capital accumulation.

It is believed that with the life cycle the intention to take credit decreases. However, over the past twenty years the amount of money American households spend on debt repayment has increased by 69%. The Washington Post reports that heads of households aged 55 to 64 now spend 22 cents on every dollar to pay off debts. A similar amount is spent by young people who are far from retirement. Since the 1990s, the growth in debt for retirees has been faster than for other categories of the population. This means that the debt burden does not decrease with age, and there is no opportunity to receive the same income after retirement. Most Americans with retirement savings accounts, whose debts are growing faster than their savings, are over 40 years old, which increases the risk of losing their homes for debt.

Economists conclude disappointingly that with this level of accumulated debt, the U.S. is now passing a "point of no return,"which will inevitably be followed by a decline in Americans' standard of living and quality of life after retirement.

Applied aspects of behavioral finance. The goal of most psychological research in the field of money and finance is to show that people do not behave rationally about money – how they earn it, how they spend it, whether or not they save it, how they borrow it and make purchases – which sometimes goes completely against all economic axioms. People often make mistakes due to ignorance of economic laws, and in the case of neurosis and addictions act to their detriment, although against their will, but quite consciously.

Practice shows that the systematic use of credit resources causes a psychological addiction, and life in debt becomes a norm of behavior regardless of the level of income.

A special role in the transition to credit consumption model was played by banking innovations. The active spread of electronic payments and introduction of credit cards leads to acceleration of transactions. This process is aided by concessional lending programs, overdrafts, and interest-free repayment periods, which also stimulate consumer demand. A report from the Federal Reserve Board concluded that the negative savings rate is largely a consequence of credit card debt.

Credit card companies sent out 5.3 billion offers in 2007, which means that every adult American received on average fifteen of these letters. By 2009 there were 1.3 billion credit cards for 308 million people in the U.S., which is about 6-8 credit cards per adult. More than 115 million Americans retain credit card debt from month to month, the average amount of debt is $9,000. Consumers spend more than $17 billion annually only on penalties for servicing credit cards. So much money is spent on interest payments that Americans are unable to save for retirement on their own. R. Duncan called this phenomenon "creditopia"that is the utopian visions of the consumers about infinite possibilities to increase their wealth by means of easy credit.

On this basis T. Krescenzi justifies hypothesis of "mega consumption"and connects spreading of credit model with psychological peculiarities of consumer behavior and socialization of consumer and the "demonstration effect"of consumption. However, consumption and consumerism are not identical concepts. Consumption is a form of deviant behavior, characteristic of the consumer society.

According to researchers, most people do not think about the future, they automatically respond to changes in income. Uncertainty affects the decision to postpone money and savings as individual agents do not know the future, they do not have methods of assessment of future changes, and information is heterogeneous and asymmetric. Uncertainty is a function of time, a changing parameter. The higher the uncertainty, the shorter the planning horizon and the harder it is to make the right decision, the higher the opportunity cost (for example, interest on a loan), the more likely it is to abandon the decision (for example, in favor of savings). As a result, most do not have substantial savings, which puts them at risk in retirement. Then the following pro-normality can be identified: the higher the level of uncertainty, the more irrationally people behave.

J. Keynes recognized that economic activity is, for the most part, rationally motivated, but a considerable part is conditioned by irrational impulses, which are the main reason for economic fluctuations and involuntary unemployment.

Well-known American economists J. Akerlof and R. Schiller mention the following among the reasons of the credit boom and the following collapse:

- unstable irrationality, which has a supranational character;
- unrestrained economic growth;
- an epidemic of unbridled enthusiasm, an excitedly enthusiastic tone.

Consumers take out loans, invest in real estate, as if it were their last chance, and prices will rise endlessly beyond their financial means. Speculative fever, enrichment at an unimaginable rate, and basic human greed are setting off a crisis spiral. When prices soar under the influence of irrationality and a bubble appears on the market, the economy adapts to these changes, which no one anticipates, and then the bubble bursts and the economic boom is replaced by a recession. Scientists have come to a very important conclusion: trying to take advantage of changing economic conditions, different people in different countries behave the same way.

Irrationality is associated with psychological factors: trust, fairness, abuse and dishonesty, money illusions, stories about people, – which cause cyclicality of economy, consumption and savings. Choosing a certain model, people are not always guided by economic considerations, and the influence of irrationality on borrowing and saving predetermines the instability of the economy and holds back growth prospects. Many people underestimate that the essence of savings is to secure the future. When decisions have to be made, the human mind becomes particularly receptive to narratives, or "human stories"that tell us about our present and future lives. Stories change all the time, bringing an element of irrationality to savings decisions. Information in the form of stories spreads between people like a virus. On the upswing – a sense of economic perspective, on the downswing – a sense of injustice and an opinion about the wrong structure of the economic system. According to Akerlof the sense of justice is one of the important factors of market economy functioning, when this feeling disappears, the nature of irrationality changes.

When making a long-term decision, a person largely relies on faith. The very concept of "credit"(Italian credo) in translation means "pre-belief". Researchers introduce a new category – the trust multiplier, that is, the coefficient showing how income increases or decreases when the level of trust increases or decreases by one point. Like the consumption multiplier, it arises from the fact that there are several circles in the expenditure cycle. The feedback is much broader and the effect is stronger, causing changes in both income and trust. When the economy is in crisis or in recession, this relationship is stronger, while at other times it is weaker.

In conclusion, we should add that scientists have identified another important feature: the transition of people to a more affluent lifestyle eliminates the need for people to carefully calculate how to use their scarce resources and frees up many subjective-psychological factors in their economic behavior. On this basis, we can say that in Russian economy, characterized by low quality of life, sharp differentiation of population by income level, the boundaries of subjective factors influence on consumers economic behavior are determined by objective conditions. In this case, only under the influence of the complex of subjective motives and objective factors there are changes in economic behavior, which generates a qualitatively new process of decision-making about consumption and savings.

The study of behavioral finance and the psychological nature of money reveals the deep mechanisms underlying economic decisions. Traditional ideas about rational choice give way to more complex models that take into account cognitive biases, emotional reactions, and social factors. Money appears not just as a tool of exchange, but as a complex psychological construct, endowed with various meanings and associations depending on personal experience, cultural context, and social status. This understanding allows for a new interpretation of financial behavior – from everyday spending to strategic investments.

Analysis of attitudes toward money as a criterion of economic behavior reveals stable types and patterns that manifest themselves at the micro and macro levels. The developed typologies of "money" behavior demonstrate how individual psychological attitudes are transformed into collective economic trends. The overlapping generations model complements this picture, showing how differences in the perception of money between age groups affect long-term economic processes – from pension savings to environmental sustainability. Macroeconomic research confirms that psychological factors can significantly modify traditional economic relationships, creating new challenges for politicians and regulators.

The practical application of behavioral finance opens up prospects for improving financial products, educational programs and regulatory practices. Taking into account the psychological aspects of monetary behavior allows us to develop more effective tools for saving, lending and investing that correspond to real, rather than hypothetical, decision-making models. This knowledge is especially valuable in the context of the digital transformation of financial markets, when new forms of money and payments create additional behavioral challenges. Further development of the behavioral approach promises a deeper understanding of the interaction of economic and psychological factors, which is necessary for building a more sustainable and inclusive financial system.

PRACTICAL SECTION

Seminar Session 1

The evolution of behavioral economics. The founders of behavioral economics. The development of behavioral economics research.

Questions and assignments:

1. Why do we need to study behavioral theories?
2. When did systematic research on behavioral theories begin?
3. What behavioral theories are you aware of?
4. Which theory is currently relevant?
5. Tell us about the prospects for the development of behavioral theories.

Recommended sources: [3, 5, 6, 16]

Seminar Session 2

The evolution of behavioral economics. The founders of behavioral economics. The development of behavioral economics research.

Questions and assignments:

1. What is the difference between behavioral theory and economic psychology?
2. What is the essence of irrational behavior?
3. Name the major works in the field of behavioral economics.
4. Who is the founder of this area of economic theory?
5. What is the applied significance of behavioral economics?

Recommended sources: [3, 5, 6, 16]

Seminar Session 3

The methodology of behavioral economic theory. The subject of behavioral economics.

Interdisciplinarity of behavioral economics. Research methods of behavioral theory. The nanoeconomic basis of behavioral economics. "Standard model"of an economic agent and possible areas of relaxation of assumptions: dynamic stability of preferences, decision making under conditions of risk, social preferences.

Questions and assignments:

1. What is the essence and content of the interdisciplinary approach?
2. Into what sections is behavioral economic theory subdivided?
3. What are the heuristics?
4. What is the purpose of studying the anomalies of economic behavior?
5. Describe the basic methods of behavioral economics.
6. What is the practical significance of simulation modeling?
7. How can the semantic differential method be used?
8. In what cases is it appropriate to conduct experiments?
9. Name the main structural levels of the economy.
10. What is nanoeconomics? How does it relate to behavioral theory?

Recommended sources: [3, 5, 6, 16]

Seminar Session 4

Choice under Risk and Uncertainty. D. Kahneman and A. Tversky's theory of perspective. Representational errors. Framing Effects. Peculiarities of decision-making under conditions of risk and uncertainty. Managing economic behavior through fear.

Questions and assignments:

1. What is the essence of perspective theory?
2. How can this theory be applied in practice?
3. Disclose the internal and external form of risk.
4. How does risk differ from uncertainty?
5. How do framing effects work?

Recommended sources: [3, 4, 9, 11, 12, 17]

Seminar Session 5

Choice under Risk and Uncertainty. D. Kahneman and A. Tversky's theory of perspective. Representational errors. Framing Effects. Peculiarities of decision-making under conditions of risk and uncertainty. Managing economic behavior through fear.

Questions and assignments:

1. What is the main difference between decision making under risk and uncertainty? Provide examples from economic practice.

2. What key components does Kahneman and Tversky's prospect theory include? How does it explain people's different attitudes toward losses and gains?

3. How do representativeness errors manifest themselves in financial behavior? Provide an example when people overestimate the probability of an event due to its vividness or memorability.

4. How do framing effects influence consumer and investment decisions? Provide examples of positive and negative framing.

5. How is insurance used to manage economic behavior? What behavioral factors can hinder rational choice of insurance products?

Recommended sources: [3, 4, 9, 11, 12, 17]

Seminar Session 6

Choice under Risk and Uncertainty. D. Kahneman and A. Tversky's theory of perspective. Representational errors. Framing Effects. Peculiarities of decision-making under conditions of risk and uncertainty. Managing economic behavior through fear.

Complete practical creative tasks:

1. Case Analysis: Imagine two companies offering the same financial product but describing it differently: one emphasizes potential returns, the other emphasizes downside protection. Explain how prospect theory and framing effects can influence customer choices.

2. Experiment: Design a short survey that demonstrates representativeness errors (e.g., estimating the probability of events based on stereotypes). Test it on people you know and analyze the results.

3. Comparative Analysis: Compare how people make decisions under risk (e.g., investing) and uncertainty (e.g., starting a startup). What cognitive biases are at play in each case?

4. Practical Application: Suggest ways in which insurance companies can use insights from behavioral economics to increase demand for their products (e.g., through rewording or choice design).

5. Critical Essay: Discuss whether people can completely overcome cognitive biases in financial decision making. What tools (education, technology, regulation) can help?

Recommended sources: [3, 4, 9, 11, 12, 17]

Seminar Session 7

The multifunctional role of personality in the economy. Psychological characteristics of economic agents.

Questions and assignments:

1. State the criteria of personality.
2. Outline the strengths and weaknesses of personality.
3. What are the forms of manifestation of the crisis of personality management?
4. Identify the positive nanoeconomic characteristics of personality.
5. Name the models of personality management.
6. What should be understood under the personality conflict?

Recommended sources: [3, 4, 5, 6, 16, 17]

Seminar Session 8

Creativity and innovativeness of consumers. Emotional intelligence. Generational theory.

Questions and assignments:

1. How do consumer creativity and innovativeness manifest themselves?
2. What approaches underlie the typology of economic agents?
3. Formulate the characteristics of different generations.
4. Make a table of the features of different generations.
5. What is the applied meaning of the theory of generations?

Recommended sources: [3, 4, 5, 6, 16, 17]

Seminar Session 9

Creativity and innovativeness of consumers. Emotional intelligence. Generational theory.

Creative assignments:

1. Case Study Analysis: Select a brand that successfully engages consumers in co-creation (e.g., LEGO Ideas, Starbucks' crowdsourcing). Analyze how the company harnesses consumer creativity and what behavioral principles it applies.

2. Generational Consumer Profile: Choose two different generations (e.g., Millennials and Baby Boomers) and compare their purchasing behaviors, brand preferences, and responses to marketing strategies. Explain how generational values shape these differences.

3. Emotional Intelligence in Marketing: Design a marketing campaign for a product that specifically targets consumers' emotional intelligence. Explain how your campaign appeals to emotions, empathy, and social connections.

4. Innovation Workshop: Imagine you are a product developer. Propose a method to encourage consumer creativity in designing a new product (e.g., gamification, crowdsourcing). Outline the steps and expected behavioral outcomes.

5. Ethical Debate: Discuss the ethical implications of using generational stereotypes in marketing. Are these generalizations helpful for targeting consumers, or do they reinforce biases? Support your argument with examples.

Recommended sources: [3, 4, 5, 6, 16, 17]

Seminar Session 10

The firm in behavioral economic theory. Limited rationality in economic decision making. A model of variable rationality. The firm as a coalition of participants. The development of behavioral theory of the firm. The social-evolutionary theory of spiral dynamics. The implementation of behavioral theory of the firm in the new economy. The behavioral basis of interaction in the virtual environment of the Internet.

Questions and assignments:

1. Name the internal structure of a corporation.
2. What are the specifics of firms in a risky environment?
3. What is the impact of psychological factors on the functioning of firms?
4. Conduct a study in your group and determine what types of monetary behavior dominate.
5. Identify psychological factors in the spread of credit consumption patterns.

Recommended sources: [3, 8, 12, 17]

Seminar Session 11

The firm in behavioral economic theory. Limited rationality in economic decision making. A model of variable rationality. The firm as a coalition of participants. The development of behavioral theory of the firm. The social-evolutionary theory of spiral dynamics. The implementation of behavioral theory of the firm in the new economy. The behavioral basis of interaction in the virtual environment of the Internet.

Questions and assignments:

1. Conduct research in your group and determine which types of monetary behavior are dominant.
2. Identify psychological factors in the spread of credit consumption patterns.
3. How can we explain the relationship between the irrational behavior of economic agents and the financial crisis?
4. What methods of stimulating pension savings can be proposed?
5. What is the confidence multiplier at financial markets?

Recommended sources: [3, 8, 12, 17]

Seminar Session 12

The firm in behavioral economic theory. Limited rationality in economic decision making. A model of variable rationality. The firm as a coalition of participants. The development of behavioral theory of the firm. The social-evolutionary theory of spiral dynamics. The implementation of behavioral theory of the firm in the new economy. The behavioral basis of interaction in the virtual environment of the Internet.

Creative assignments:

1. Case Study Analysis: Select a well-known company and analyze its major strategic decisions through the lens of limited rationality. Identify instances where cognitive biases or bounded rationality likely influenced outcomes.

2. Organizational Design Project: Develop a proposal for structuring a firm's decision-making processes that accounts for variable rationality among employees. Include mechanisms to improve decision quality while acknowledging cognitive limitations.

3. Stakeholder Simulation: Create a role-playing exercise where participants represent different coalition members within a firm (executives, employees, investors). Have them negotiate a major business decision while demonstrating how behavioral factors influence the process.

4. Digital Transformation Analysis: Examine how a traditional firm has adapted to the digital economy using behavioral principles. Evaluate how the shift to virtual interactions has changed internal decision-making and external stakeholder engagement.

5. Future Scenario Development: Imagine how the behavioral theory of the firm might evolve in the next decade considering technological advancements. Outline potential new behavioral challenges and opportunities that emerging technologies like AI and metaverse platforms might create for organizational decision-making.

Recommended sources: [3, 8, 12, 17]

Seminar Session 13

The firm in behavioral economic theory. Limited rationality in economic decision making. A model of variable rationality. The firm as a coalition of participants. The development of behavioral theory of the firm. The social-evolutionary theory of spiral dynamics. The implementation of behavioral theory of the firm in the new economy. The behavioral basis of interaction in the virtual environment of the Internet.

Questions and assignments:

1. What is the impact of psychological factors on the functioning of firms?
2. How can irrational behavior of economic agents and financial crisis be explained?
3. What does the confidence multiplier mean in financial markets?
4. Can uncertainty be attributed to the causes of increased competition?
5. What is the significance of the theory of bounded and variable rationality in society?

Prepare an essay on "The Behavioral Basis of Interaction in the Virtual Environment of the Internet".

Recommended sources: [3, 8, 12, 17]

Seminar Session 14

Behavioral theory of consumption. The basic concepts of the behavioral theory of consumption. The subjective-psychological concept of the cycle. Psychological features of consumer choice.

Questions and exercises:

1. Reveal the basic concepts of behavioral theory of consumption.
2. What is the essence of Easterlin's paradox?
3. Characterize "herd behavior"as an economic-psychological category.

Recommended sources: [3, 4, 5, 6, 9, 10, 12, 16]

Seminar Session 15

The influence of information cascades on consumer behavior. Applied aspects of behavioral theory of consumption.

The latest trends in consumer behavior in the market. Ecologization of consumer behavior. Aestheticization of consumer behavior.

Questions and assignments:

1. What are information cascades and how do they affect the consumer?
2. Name and characterize the stages of decision-making by consumers in the market.
3. What psychological factors influence consumer choice?
4. State the reasons for switching to a credit model of consumption.
5. What indicator enters as an indicator of consumer confidence?
6. How are behavioral theory of consumption and impression economics related?
7. What are the current trends in consumer behavior in the new economy?

Recommended sources: [3, 4, 5, 6, 9, 10, 12, 16]

Seminar Session 16

Behavioral theory of consumption. The basic concepts of the behavioral theory of consumption. The subjective-psychological concept of the cycle. Psychological features of consumer choice.

Creative tasks:

1. Practical experiment: Design a small study to demonstrate the effect of price anchoring on consumer choice. Describe the methodology, hypotheses and possible results.

2. Comparative analysis: Compare consumer behavior during economic upturn and downturn from the point of view of the subjective-psychological concept. What psychological factors prevail in each case?

3. Case study: Analyze an advertising campaign of a well-known brand from the point of view of the use of behavioral principles. What concepts of the behavioral theory of consumption were applied?

4. Development of recommendations: Make recommendations for retailers on the design of the sales area, taking into account the psychological characteristics of consumer choice. Justify your proposals

5. Predictive task: How do you think the behavioral theory of consumption will develop in the digital economy? What new aspects of consumer behavior will require study?

Recommended sources: [3, 4, 5, 6, 9, 10, 12, 16]

Seminar Session 17

Behavioral finance. The economic and psychological essence of money. Attitudes toward money as a criterion of comparative modes of behavior of economic subjects. Typology of "money"behavior. Macroeconomic studies of the psychology of money. The model of overlapping generations. Applied aspects of behavioral finance.

Questions and assignments:

1. What is the difference between the economic and psychological nature of money?
2. Conduct a study in your group and determine what types of money behavior dominate.
3. Identify the psychological factors in the spread of credit consumption patterns.
4. How can we explain the relationship between the irrational behavior of economic agents and the financial crisis?
5. What methods of stimulating pension savings can be proposed?

Recommended sources: [3, 7, 8, 9, 11, 14]

Seminar Session 18

Behavioral finance. The economic and psychological essence of money. Attitudes toward money as a criterion of comparative modes of behavior of economic subjects. Typology of "money"behavior. Macroeconomic studies of the psychology of money. The model of overlapping generations. Applied aspects of behavioral finance.

Questions and assignments:

1. Describe in detail the psychological factors of the spread of the credit consumption model.

2. Give examples and explain the connection between irrational behavior of economic agents and the financial crisis?

3. Develop your method of stimulating retirement savings can be offered?

Prepare an essay on "One Way to Stimulate Pension Savings".

Recommended sources: [3, 7, 8, 9, 11, 14]

Seminar Session 19

Macroeconomic studies of the psychology of money. The model of overlapping generations. Applications of behavioral finance.

Questions and assignments:

1. What does the confidence multiplier mean in financial markets?
2. What are the reasons for the credit boom within behavioral science?
3. What is the role of savings in the economy?
4. Name ways to improve financial literacy.
5. What is the practical importance of behavioral finance?

Recommended sources: [3, 7, 8, 9, 11, 14]

Seminar Session 20

Macroeconomic studies of the psychology of money. The model of overlapping generations. Applications of behavioral finance.

Questions and assignments:

1. Describe the essence of the overlapping generations model.

2. Describe the essence of the applications of behavioral finance.

3. Develop your method of stimulating retirement savings can you offer?

Creative Tasks:

1. Research Project: Develop a methodology for studying the impact of collective monetary attitudes on inflation processes in the economy. What indicators would you use for measurement?

2. Comparative Analysis: Compare how different generations (millennials, boomers) react to changes in monetary policy in terms of their psychological attitudes towards money.

3. Case Study: Analyze a specific historical example of a macroeconomic crisis through the prism of the psychology of money. What behavioral factors exacerbated the situation?

4. Policy Recommendation: What economic policy measures would you propose, given the findings of the overlapping generations model and the psychological aspects of monetary behavior?

5. Predictive Task: How do you think the development of digital currencies will change traditional psychological models of handling money at the macroeconomic level?

Recommended sources: [3, 7, 8, 9, 11, 14]

KNOWLEDGE TEST SECTION

TEST

Please complete this test!

EXAMINATION QUESTIONS

1. The methodology of behavioral economic theory. The subject of behavioural economics research. (Section 1. Subsection(s) 1.1)

2. Evolution of behavioural economics. (Section 1. Subsection(s) 1.1)

3. The founders of behavioral economics. (Section 1. Subsection(s) 1.1)

4. The development of research in behavioral economics. (Section 1. Subsection(s) 1.2)

5. The interdisciplinarity of behavioral economics. (Section 1. Subsection(s) 1.2)

6. Research methods for behavioral theory. (Section 1. Subsection(s) 1.3)

7. The nanoeconomic basis of behavioral science. (Section 1. Subsection(s) 1.3)

8. "Standard model"of the economic agent and possible directions for relaxing assumptions: dynamic stability of preferences, decision-making under risk, social preferences. (Section 1. Subsection(s) 1.3)

9. Choice under Risk and Uncertainty. D. Kahneman and A. Tversky's theory of perspective. (Section 2. Subsection(s) 2.1)

10. Representational errors. Framing effects. (Section 2. Subsection(s) 2.2)

11. Decision-making under conditions of risk and uncertainty. (Section 2. Subsection(s) 2.2)

12. The multi-functional role of the individual in the economy. (Section 3. Subsection(s) 3.1)

13. Psychological characteristics of economic agents. Creativity and innovativeness of consumers. (Section 3. Subsection(s) 3.1)

14. Emotional intelligence. Generational theory. (Section 3. Subsection(s) 3.2)

15. The firm in behavioral economic theory. Limited rationality in economic decision-making. (Section 4. Subsection(s) 4.1)

16. A model of variable rationality. (Section 4. Subsection(s) 4.1)

17. The firm as a coalition of actors. The development of the behavioral theory of the firm. (Section 4. Subsection(s) 4.2)

18. The social-evolutionary theory of spiral dynamics. (Section 4. Subsection(s) 4.2)

19. Implementing the behavioral theory of the firm in the new economy. (Section 4. Subsection(s) 4.2)

20. The behavioral basis of interaction in the virtual environment of the Internet. (Section 4. Subsection(s) 4.2)

21. Behavioral theory of consumption. Basic concepts of the behavioral theory of consumption. (Section 5. Subsection(s) 5.1)

22. The subjective-psychological concept of the cycle. Psychological features of consumer choice. (Section 5. Subsection(s) 5.1)

23. The influence of information cascades on consumer behavior. (Section 5. Subsection(s) 5.2)

24. Applied aspects of behavioral theory of consumption. (Section 5. Subsection(s) 5.2)

25. Emerging trends in consumer behavior in the marketplace. (Section 5. Subsection(s) 5.2)

26. The greening of consumer behavior. (Section 5. Subsection(s) 5.2)

27. The aestheticization of consumer behaviour. (Section 5. Subsection(s) 5.2)

28. Behavioral finance. The economic and psychological nature of money. (Section 6. Subsection(s) 6.1)

29. Attitudes to money as a criterion of comparative modes of behavior of economic actors. (Section 6. Subsection(s) 6.2)

30. A typology of "money"behavior. (Section 6. Subsection(s) 6.2)

31. Macroeconomic studies of the psychology of money. (Section 6. Subsection(s) 6.2)

32. The overlapping generations model. (Section 6. Subsection(s) 6.2)

33. Applications of behavioral finance. (Section 6. Subsection(s) 6.2)

ADDITIONAL SECTION

ELEMENTS OF CURRICULUM DOCUMENTATION

EXPLANATORY NOTE

The content of the discipline is an overview of the main achievements of modern behavioral and experimental economics. The use of psychologically valid assumptions in economic analysis allows not only to improve the explanatory power of economic theory, but also to offer more effective practical recommendations in the field of development programs and social policies. Over the past 20 years, this area of research has firmly entered the current trends in the development of economic science. In addition to the content changes, this has also affected the level of tools – more and more often economists use experimental methods in their work. Students of the course will consistently get acquainted with the main sections of behavioral economics, as well as get an idea of the interaction of economic theory, experimental methods, and statistical observations in explaining human behavior. In this way, the course combines basic theoretical models and empirical results.

УчебнаяThe curriculum is based on the higher education standard OSVO 7-06-0311-01-2023 "Economics approved by Resolutionm of the Ministry of Education of the Republic of Belarus No. 163on 31.05.2023; the curriculum for the specialty 7-06-0311-01 "Economics approved by theoro rector 22.0.05.202.2024, registration Number Y-7-004-2-24/uch.

According to the curriculum of specialty 7-06-0311-01 "Economics thediscipline "Behavioral and Experimental Economics"belongs to the component of higher education institutions (module "Methods of Economic Analysis"). The discipline "Behavioral and Experimental Economics"is associated with the studyeм of such curriculum disciplines as "Macroeconomic Analysis and Policy "Forecasting the national Economy "Institutional Analysis".

The aim of the discipline "Behavioral and Experimental Economics"is to develop undergraduates ' competencies in determining the influence of social, cognitive and emotional factors on economic behavior, economic decision – making by individuals and institutions, and determining the consequences of this influence on market variables (prices, profits, resource allocation).

Tasks of studying the academic discipline:

- expansion знаний of the master's student's knowledge system, which will allow him to analyze the patterns of influence of social, cognitive and emotional factors on economic behavior;

- development of the master's student's abilities to analyze and interpret the entire volume of scientific information within the framework of the discipline being studied and in interdisciplinary connection with other disciplines;

- development of the master's student's competencies in the study of phenomena occurring in the market, collective choice processes, which also contain elements of cognitive errors and selfishness when making decisions by economic agents.

As a result of studying the academic discipline, the student must:

know:

- basic concepts and tools of behavioral economic theory;

- the possibilities of various areas of modern behavioral economics and the tasks they solve;

- traditional and behavioral finance;

- experimental economy;

be able to:

- apply the interdisciplinary approach of behavioral economics;

- use the tools and methods of statistical analysis and be able to apply the knowledge gained in practice in the study of modern behavioral economics

possess the following skills:

- work with original scientific publications on behavioral economics;

- search and use of information necessary for the implementation of behavioral analysis of modern economic phenomena and processes;

- independent analysis of formal and qualitative models of behavioral economic theory;

- analyze and interpret the entire body of scientific information within the framework of the discipline being studied and in interdisciplinary connection with other disciplines;

- apply the analysis tools in practice.

Studying the academic discipline "Behavioral and Experimental Economics"will contribute to the formationof the following competencies (in accordance with the educational standard of the specialty) – conduct an economic experiment and interpret its results, use the tools of behavioral economics in practical and research activities (competence SK –1).

The distribution of classroom time by class type and semester is as follows:

	Total hours	Total classroom hours	Lectures	Seminars
Full-time				
1 semester	198	66	26	40
Total:	198	66	26	40

Independent work of undergraduates consists in preparing for oral surveys and tests, writing an abstract, preparing reports and presentations that deepen the study of the discipline.

The labor intensity of the discipline is 6 creditx units. The form of control in the academic discipline for full-time higher education is an exam in the 1-st semester.

CONTENT OF THE TRAINING MATERIAL

Topic 1. Introduction to Behavioral and Experimental Economics

Evolution of behavioral economics. Founders of behavioral economics. The development of behavioral economics research.

The methodology of behavioral economic theory. The subject of behavioral economics research. The interdisciplinary nature of behavioral economics. Research methods of behavioral theory. The nanoeconomic basis of behavioral economics. The "standard model"of an economic agent and possible directions of relaxation of assumptions: dynamic stability of preferences, decision-making under conditions of risk, social preferences.

Topic 2. Choice in conditions of risk and uncertainty

Choice in conditions of risk and uncertainty. The perspective theory of D. Kahneman and A. Tversky. Representativeness errors. Framing effects. Features of decision-making in conditions of risk and uncertainty. Managing economic behavior with fears.

Topic 3. Behavioral theory of personality

Multifunctional role of the individual in the economy. Psychological characteristics of economic agents. Creativity and innovation of consumers. Emotional intelligence. Generational theory.

Topic 4. Behavioral theory of the firm

The firm in behavioral economics. Limited rationality in economic decision-making. Model of variable rationality. Firm as a coalition of participants. Development of the behavioral theory of the firm. Socio-evolutionary theory of spiral dynamics. Implementation of the behavioral theory of the firm in the new economy. Behavioral basis of interaction in a virtual Internet environment.

Topic 5. Behavioral theory of consumption

Behavioral theory of consumption. Basic concepts of behavioral theory of consumption. Subjective-psychological concept of the cycle. Psychological features of consumer choice. The impact of information cascades on consumer behavior. Applied aspects of behavioral theory of consumption.

The latest trends in consumer behavior in the market. Greening consumer behavior. Aestheticization of consumer behavior.

Topic 6. Behavioral finance

Behavioral finance. The economic and psychological nature of money. Attitude to money as a criterion of comparative ways of behavior of economic entities. Typology of "money"behavior. Macroeconomic studies of the psychology of money. A model of overlapping generations. Applied aspects of behavioral finance.

EDUCATIONAL AND METHODICAL MAP OF THE ACADEMIC DISCIPLINE

(Full-time higher education)

Section number, topics	Section name, topics	Number of classroom hours: Lectures	Practical classes	Seminars lessons	Laboratory classes	Number of USR hours	Literature	Teaching tools (equipment, visual aids, etc.)	Form of knowledge control
1	2	3	4	5	6	7	8	9	10
1	Introduction to Behavioral and Experimental Economics	4		6			main: [1, p. 7–28], [2, p. 10–24]; additional: [3, p. 10–26]		Oral survey
2	Choice under conditions of risk and uncertainty	4		6			main: [1, p. 28–55], [2, p. 25–66]; additional: [3, p. 26–36]		Oral survey, abstract
3	Behavioral theory of personality	4		6			main: [1, p. 55–80], [2, p. 66–89]		Oral survey, report and presentation
4	Behavioral theory of the firm	4		6			basic: [1, p. 81–91], [2, p. 90–114]; additional: [3, p. 117–131]		Oral survey, abstract
5	Behavioral theory of consumption	6		8			main: [1, p. 91–122], [2, p. 115–150]; additional information: [3, p. 44–91–91]		Oral survey, report and presentation
6	Behavioral Finance	4		8			main: [1, p. 122–149]; additional: [3, p. 36–44]		Oral survey, abstract
	TOTAL: 66 hours	**26**		**40**					**Exam**

PROGRAM LITERATURE

Main

1. Baibardina, T. N. Consumer behavior / T. N., Kozhukhova, G. N. Yakimik/ Consumer Behavior : a textbook for universities : Approved by the Ministry of Education of the Republic of Belarus. Minsk : Grevtsov Publishing House, 2010, –176 p.
2. Kalacheva I. V. Economic psychology: an educational and methodical complex. – Mogilev: Kuleshov State University, 2011, – 216 p.

Additional information

3. Alekhine, B. I. Behavioral finance: textbook and practical course for bachelor and master students [Behavioral finance: textbook and practical course for bachelor and master students] / B. I. Alekhine. – M.: Yurait, 2019. – 182 p.
4. Borodkin V. I., Sidorova M. V. Metodika prepodavaniya ekonomicheskoi psikhologii : uchebno-metodicheskoe posobie [Methods of teaching economic Psychology: a textbook] / V. I. Borodkin, M. V. Sidorova Minsk : RIPO Publ., 2014, – 128 p.

LIST OF USED SOURCES

(list of educational publications and information and analytical materials recommended for use of the Electronic educational and methodological complex)

1. Deineka, O. S. Economic Psychology: a textbook / O. S. Deineka. – St. Petersburg, 2004. – 250 p.

2. Zakharov, N. I. Behavioral Economics, or Why in Russia We Want the Best, But It Turns Out as Always [Electronic resource] / N. I. Zakharov. – Moscow: INFRA-M, 2017. – 213 p.

3. Manakhova, I. V. Behavioral Economics: a textbook for students majoring in 38.05.01 Economic Security / I. V. Manakhova. – Saratov: Saratov Socio-Economic Institute (branch) of the Plekhanov Russian University of Economics. Plekhanov, 2017. – 120 p.

4. Olsevich, Yu. Ya. Psychological Foundations of Economic Behavior [Electronic resource] / Yu. Ya. Olsevich. – M.: INFRA-M, 2009. – 413 p.

5. Problems of Economic Psychology. Volume 1 / Responsible. editors A. L. Zhuravlev, A. B. Kupreychenko. – M.: Institute of Psychology of the Russian Academy of Sciences, 2004. – 490 p.

6. Problems of Economic Psychology. Volume 2 / Responsible. editors A. L. Zhuravlev, A. B. Kupreychenko. – M.: Institute of Psychology of the Russian Academy of Sciences, 2005. – 522 p.

7. Rozanova, N. M. Microeconomics. Handbook for Future Professionals: textbook. in 2 volumes / Nat. research. University of Higher School of Economics. – 3rd ed., revised and enlarged. – Moscow: Yurait, 2015. – 385 p.

8. Spasennikov, V. V. Economic Psychology / V. V. Spasennikov. – Moscow: PERSE, 2003. – 366 p.
9. Economic Psychology in Russia and Belarus: Collection of scientific works / edited by A. L. Zhuravlev and V. A. Polikarpov. – Minsk: Ekonompress, 2007. – 498 p.
10. Economic Psychology / edited by I. V. Andreeva – St. Petersburg, 2000
11. Chekansky, A. N. Microeconomics. Intermediate level. Textbook / A. N. Chekansky, N. M. Frolova. – M.: INFRA-M, 2016. – 685 p.
12. Draganchuk, L. S. Consumer behavior: textbook. allowance [Electronic resource] / L. S. Draganchuk. – M.: INFRA-M, 2017. – 192 p.
13. Oleynik, A. A. Institutional economics: textbook [Electronic resource] / A. N. Oleynik. – M.: Infra-M, 2013. – 416 p.
14. Kireev, A. P. Microeconomics for advanced people. Problems and solutions: textbook. allowance / A. P. Kireev, P. A. Kireev. – M.: Infra-M, 2013. – 159 p.
15. Mas-Colell, A. Microeconomic Theory: Textbook. Book 1 / translated from English under the scientific editorship of M. I. Levin, E. V. Pokatovich; [Russian Academy of National Economy and Public Administration under the President of the Russian Federation]. – M.: Delo, 2016. – 708 p.
16. https://ru.wikipedia.org/wiki/%D0%9F%D0%BE%D0%B2%D0%B5%D0%B4%D0%B5%D0%BD%D1%87%D0%B5%D1%81%D0%BA%D0%B0%D1%8F_%D1%8D%D0%BA%D0%BE%D0%BD%D0%BE%D0%BC%D0%B8%D0%BA%D0%B0.
17. Yasinsky, Yu. M. Uncertainty and risk in the economy: a course of lectures / Yu. M. Yasinsky, A. O. Tikhonov; Academy of Management under the President of the Republic of Belarus. – Minsk: 2009. – 127 p.

18. Alekhine, B. I. Behavioral finance: textbook and practical course for bachelor and master students [Behavioral finance: textbook and practical course for bachelor and master students] / B. I. Alekhine. – M.: Yurait, 2019. – 182 p.

19. Baibardina, T. N. Consumer behavior / T. N., Kozhukhova, G. N. Yakimik/ Consumer Behavior : a textbook for universities : Approved by the Ministry of Education of the Republic of Belarus. Minsk : Grevtsov Publishing House, 2010, –176 p.

20. Kalacheva I. V. Economic psychology: an educational and methodical complex. – Mogilev: Kuleshov State University, 2011, – 216 p.

21. Thaler, R. New behavioral economics: why people break the rules of traditional economics and how to make money on it / R. Thaler. –/ Moscow: Eksmo, 2023. – 384 p.