

IMPROVING THE EFFECTIVENESS OF MANAGEMENT OF THE ENTERPRISE HOUSING AND COMMUNAL SERVICES IN UKRAINE BASED ON THE STUDY OF MENTAL MODELS OF ITS PARTICIPANTS

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Abstract

It is known that effective management of the housing and utilities sector depends not only on the current situation in the managed system and its immediate surroundings but also on the people who make these decisions. Their experience, professional training, intuition, and mood directly affect the quality of managerial decisions and therefore, indirectly influence the positioning of the managed system in time and space. Public recognition of this influence led to the emergence of behavioral economics as a new branch of economic science. The latter studies how people make management decisions in everyday life and how to improve their quality, using the hidden capabilities of consciousness. At the same time, behavioral economics seeks to adapt the achievements of its predecessors (classical and neoclassical economic concepts) on the evolutionary path of civilizational development and find the best practical application for them.

One of the most significant achievements of neoclassical economics is the model approach to organizational management. It seems that it will also take its rightful place in behavioral economics. The present article tries to reveal the composition and content of mental models, which will form the basis of model choice in the conditions of reforming the housing and utilities sector in Ukraine. The main difficulty of such a hypothesis is that the elements that form mental models, the connections between them and the environment, are intangible in nature and are not given to us in the senses.

Keywords: *mental models, enterprise management, housing and communal services, metacognitive experience, reforming the housing and utilities sector, social axioms, game theories, behavioral variables*

1. INTRODUCTION

The psychological view on the socio-economic development of the housing and utilities sector has its own specifics since its focus is not on macroeconomic and social problems, but on people with their needs, motives, emotions, perceptions, and beliefs, acting sometimes illogically and irrationally. Moreover, very many of their perceptions and motives for behavior are imbued with the culture in which they have been socialized, and this determines the cultural specificity of many economic, political, and social processes going on at the individual and group levels in different countries.

Availability of labor resources and efficiency of their use have the most direct influence on the efficiency of production activity, economic indicators of organization, financial stability, competitiveness, and position on the market. In the sphere of housing and communal services the problem of labor efficiency is much more acute than in industrial branches, and in the Ukrainian economy in general. Even though many organizations of housing and communal services took a course on modernization of the material base and reorganization of the management system, without solving personnel problems, successful reform of the industry is impossible. The housing and utilities system needs to cope with the problem of the lack of qualified personnel, to solve the issue of motivation and incentives for working personnel, to introduce more modern methods of personnel management, which would consider the specifics of the organizations of this industry by studying the mental models of the participants.

The object of research: mental models of participants of housing and communal services in Ukraine, socio-cultural factors contributing to the economic development of housing, and communal services in Ukraine.

Objectives of the study:

- theoretical concept of socio-cultural predictors of economic consciousness and behavior and its testing in a pilot study (questionnaire);
- study of participants' mental models through the study of social axioms (presuppositions of consciousness, which induce cooperative or competitive behavior);
- revealing the interrelation of socio-economic attitudes and perceptions of different social categories of Ukrainians with socio-cultural dimensions of modern Ukrainian society.

Methodology: Application of the methodological approach to the study of mental models of the participants of housing and communal services using the analytical method. A pilot study was based on the development of a questionnaire for the residents of Ukraine on the issues of satisfaction with the quality of services in the sphere of housing and communal services. Use of the game theory to improve the efficiency of management of housing and communal services enterprises.

Analysis of the research and setting of the task: Mental models in the sphere of housing and communal services so rigidly determine the decisions made and the subsequent actions because they determine the perception of the situation and the formulation of the problem. Holders of different sets of mental models look at the same phenomenon, but describe it differently, according to the models they use.

Hence there is a need to connect the available mental models with the ability to work with them, i.e. to reach the second level of mastering knowledge according to G. Bateson [1]. The first level allows to form mental models as hypotheses, and the second consists of a change of hypotheses to reveal the reasons for arising problems. It should be clearly understood that ideas about the world are formed by facts, and mental models describing these ideas are hypotheses, seeking to link these facts into a coherent system. Only after this can one begin the analytical activity, that is, the analysis-synthesis of ideas about reality. Without a reflexive analysis of the ways of analytical work - one's own and others' - the ability to experiment with new mental models and ways of working with them together with others will be limited.

At this point in the application of mental models to analytic work, new challenges arise. Current research shows that mental models used to represent complex systems contain systemic flaws. The established mental models do not consider the most important feedback mechanisms, the emergence of time delays in the reactions of multicomponent systems, they focus on explicit variables that are not critical, for the system in question. J. Sterman [2] experimentally showed that in the process of analytical activity and decision making on management of such complex systems like supply chains, managers systematically commit the above errors, that is, they use mental models inadequate in their complexity to the system in question.

Overcoming of the inadequacy of mental models allows increasing the efficiency of analytical activity, relieving the researcher from the false restrictions which do not allow to go beyond the developed representations, or on the contrary will not allow conducting the research based on unreasonable assumptions and postulates. Many famous scientists, including Nobel laureates, have devoted their work to the study of unsubstantiated mental models. For example, in 1979 there was a famous article "Theory of Perspectives: Analysis of Decision-Making under Conditions of Risk" written by D. Kahneman (Nobel Prize winner). D. Kahneman (Nobel Prize in Economics 2002) in co-authorship with a professor of psychology A. Tversky [3]. The authors of this article, which marked the beginning of the so-called behavioral economics, presented the results of experiments in which people were asked to choose between different alternatives.

These experiments proved that people cannot rationally estimate either the magnitude of expected benefits or losses, or their probabilities. The works of the following authors are devoted to the problems of rational decision-making: M. Allais (rational human behavior under conditions of risk) [4], J. von Neumann (utility theory, game theory, and economic behavior) [5], R. Ackoff (decision-making, goal-oriented systems) [6], P. Senge (systems thinking) [7], D. Dörner (system dynamic analysis of social systems) [8], etc.

Thus, the problem which arises during the formation of competencies necessary for the analytical activity of participants of housing and communal services was defined. As formulated by K. Argyris [9], the problem is that "people do not always act in accordance with the theories they express, but they always act in accordance with the theories (intellectual models) they use". About analytical activity, the problem is transformed and revived by the fact that mental models are actionable—they shape our actions, influencing the decisions we make.

2. RESULTS OF THE STUDY

Mental models of the participants of the relations of the sphere of housing and communal services in Ukraine represent knowledge and representations about reality in the form of systems of interrelated facts and cause-effect relations. [10, pp. 125]. In modern terminology, we can say that mental models (mental representations, intellectual models) are the products of the analytical activity of man as a component of his practical activity. But when encountering new real or abstract objects, a person finds himself in a situation where analytical activity is impossible due to the absence of any mental model, and then the goal of the analytical activity is to create new models. Let us consider methods with which it is possible to unmistakably determine the mental models of participants of relations in the sphere of housing and communal services when making managerial decisions. Let us consider the most effective methods used by modern economists and managers in the sphere of housing and communal services:

1. The system approach as a methodological principle is used in various branches of science and human activities, including the sphere of housing and communal services. The Australian biologist Ludwig von Bertalanffy [11]. is the founder of the general theory of systems. He viewed the system as a set of interconnected elements with an output (goal), an input (resources), a connection to the external environment, and a feedback loop.

2. Today no type of professional activity can do without the Systems Thinking method, including in the sphere of housing and communal services. For example, its purpose in project management in the housing and utilities sector is to direct the manager's (manager's) efforts toward systemic development of the sector. He can consider the project as a complex system: everything begins with setting and agreeing on the goal, then follows planning, implementation of the planned work, and obtaining the necessary result. The system approach implies constant control over the project progress, identifying deviations from the plan and taking corrective actions (up to changing the main parameters of the project: timing, budget, characteristics of the results and objectives, agreed with the stakeholders).

3. According to the authors, to determine the mental models of participants of relations in the sphere of housing and communal services and management decision-making, it is necessary to apply Scenario analysis, which is a process of analysis of possible variants of development of events in the future. In this case, the experience of the past is used, when the previously established stable trends are studied, that is, in the process of scenario analysis, possible variants of events and turning points associated with already past events are considered.

Experience shows that it is preferable to simultaneously form three scenarios when making management decisions in the housing and utilities sector: optimistic, pessimistic, and most likely, since more of them may lead to an incorrect analysis. A project is considered sustainable if under all scenarios it turns out to be effective and financially feasible, and possible adverse effects are eliminated by measures provided for by organizational and economic mechanisms. In practice, scenario analysis can be performed both with the help of spreadsheets (e.g. Excel) and with the use of special computer programs, allowing to use of simulation modeling methods (as a variant of Simulink). Studies of various natural - natural, economic, and social - data show that many indicators are distributed exactly in accordance with the power law. The most often used to illustrate it is Pareto's law (20/80 principle), which states that 20% of the effort yields 80% of the result, and the remaining 80% of the effort yields the remaining 20%. It can be used as a basis when analyzing the factors of efficiency of the housing and utilities sector and optimizing its results: If a minimum set of necessary actions is selected correctly, a considerable part of the project can be quickly completed. Moreover, it may turn out that further improvements will be inefficient and unjustified (according to the Pareto curve).

4. Sensitivity analysis is an assessment of the impact of changes in the initial parameters of a project in the housing and utilities sector on its final characteristics, which are usually used as the internal rate of return or net present value (NPV). The sensitivity analysis is based on the question "What happens if...?", which is designed to determine how much the effectiveness of the project will change if one of the input parameters deviates from the norm. This type of analysis identifies the most critical variables that are most likely to affect the feasibility and effectiveness of a project in the housing and utilities sector. The volume of work, tariffs, delayed payment period, inflation rate, etc. can be taken as input variables. The results of sensitivity analysis are given in tabular or graphical forms, although the latter is more illustrative. However, sensitivity analysis has a serious limitation - it is a one-factor method, so it is not applicable in situations where a change in one variable entails a change in the other.

5. Cost-benefit analysis allows you to measure the total costs and benefits of a project, using the same unit of measurement (usually money). The analysis seeks answers to the following questions: "Is this project worth its money?" or "Which option is most profitable?" The problem in comparing costs and benefits is that the costs are usually material, concrete, and expressed in financial terms (tariffs, the cost of services in the field of housing and utilities), while the benefits cannot always be expressed in monetary terms (improvement in the quality of services provided). For this reason, such an analysis should be carried out only if all the parameters involved can be represented "in the money". Usually, this is not possible when it comes to ethical, internal, temporal, and aesthetic components.

6. Simulation modeling is the simulation of control of a real process or system over time. Simulation modeling is resorted to when it is not possible to conduct research on a real object or build an analytical model. It turns out that this method is the only practically realizable method intended for studying complex systems. The purpose of simulation modeling is to reproduce the behavior of the system based on the results of analysis of the most essential interrelations between its elements. Simulation modeling methodology allows building models that describe various processes as they would occur, allowing assessing risks in the implementation of a major project and minimizing losses. The simulation itself is carried out with the help of specialized computer programs.

7. Pareto Efficiency is a state of the system, in which the value of each indicator cannot be improved without deterioration of the others. In simple words, it is getting the maximum possible benefits from the available resources. This requires a constant balancing of benefits and costs, that is, behaving rationally. Rational behavior means that the producer and consumer of goods strive to maximize their benefits and minimize their costs. Pareto-improvement takes place when a change in the economic situation leads to an improvement in the situation of at least one individual without worsening the situation of another. In other words, it is a change in which no one loses, but at least one gains. The Pareto Optimum is a popular model for efficiency research, but it is rarely used for social research because it has two drawbacks. First, it does not consider the distribution of resources among people. As Nobel laureate in economics, Amartya Sen wrote, "society may be Pareto-optimal, but some may be in extreme poverty and others in luxury since the poverty of some cannot be alleviated without reducing the luxury of the rich" [12, pp. 56]. Second, the Pareto optimum assumes that efficiency is achieved spontaneously, without state intervention, and this does not always correspond to the real situation. From the above, we can conclude that mental models in the housing and utilities sector will help to see the situation in the housing and utilities sector from a different angle and solve a seemingly difficult problem. The effect of their application is especially noticeable when, because of thought training, you gain the ability to see several options for solving the problem at once.

The psychological views presented on what specialists call analytical activity to bring us back to the philosophical assessment of the role of mental models. Such an assessment can be extracted from a book by the contemporary German philosopher P. Sloterdijk, which bears the "canto-like" title Critique of the Cynical Reason: "Let us dare to formulate it sharply: in the heads of men work historically formed programs of thinking and programs of perception, which "mediate" everything that comes from outside inward and from inside outward. The human apparatus of cognition is. To a certain extent, some internal relay, a transducer in which schemes of perception, forms of judgment, and logical structures are programmed. Concrete consciousness is not something direct, it is always mediated by an "inner structure. In relation to this traditionally transmitted inner structure, reflection can, in principle, choose

from three relations: to try to escape from it by "deprogramming" itself; to move within it with possible caution; and to capitulate as reflection, accepting the thesis that structure is everything" [13, pp. 102]. As an epigraph to his book *The Art of Problem Solving*, the famous analyst R. Ackoff [6] introduced the words of the no less famous psychologist R. Laing: "Between true and false representations of the world around us lies a spectrum of images that we tend to pass off as reality. The desire to maintain our adherence to these images constrains our imagination and thought. We must strive to move away from familiar concepts and learn to look at the world in a new way; only then can creative growth of the individual and improvement of the process of cognition itself be possible" [14].

To ensure successful "problem-solving activity", by which analytical activity is meant, R. Ackoff suggests only three components: competence, courage in decision-making, ability to solve problems creatively. Modern management science, the theory of decision making, research of operations show that in the activity the person constantly faces such objects, the phenomena, and situations which do not give in the description in terms of the saved up mental models, traditional assumptions, seemingly infallible laws [6]. The research of American analysts in the field of knowledge applicability, as well as in the field of organizational learning showed what is the process of accumulation and use of experience within the professional activity and development of an individual organization. In the book "Organizational learning: A theory of action perspective" K. Argyris and D. Schon [9] introduced a distinction between one- and two-step learning, which is related to G. Bateson's [1] notions of first and second-order learning. In one-step learning, individuals, groups, or organizations modify their actions according to the difference between expected and received results. In the second cycle of two-step learning, actors (individuals, groups, or organizations) are asked about the values, assumptions, and policies that led to the actions identified in the first phase of learning. If trainees can consider and modify these aspects of the problem, then second-order or second-stage learning has been effective. Second-order learning consists of learning from first-order learning. Thus, reflexive learning is carried out, as the object of analytical activity becomes the subject of its first stage.

Decision-making in complex dynamic systems constantly requires the processes of knowledge acquisition and knowledge application to be performed. Let us list the main "generally accepted" mental models, the application of which is unquestionable in the case of research of systems that do not possess the above-mentioned signs of complexity (nondeterminism, dynamism, feedbacks, time delays of reactions, emergent properties). Such mental "axioms", taken as a priori properties of the situations under consideration, are:

- rationality, understood as the presence of criteria and their mandatory consideration when making a decision;
- representativeness of the data based on which the decision is taken;
- orderliness of objects being compared according to a certain consolidated criterion;
- bivalency of logic (acceptance of threshold values of comparisons leading to a strict classification of complex objects).

It is hardly possible to give a complete list of such "pseudo-axioms". Moreover, the enumerated provisions can form a great number of combinations, thus generating another complicated system, namely, a system of fallacies, "scientific mythology," generating a systematic exposure of our thinking to "cognitive illusions" as defined by H. Simon [15, pp. 76-78], but even overcoming the enumerated provisions will allow increasing considerably the efficiency of analytic activity and the managerial decisions made on its basis. No less important is the task of correcting mental models if they incorrectly reflect reality. One of the main difficulties encountered in management practice is changing mental models, which is often a non-trivial task. It is even more difficult to change the mental models of a group of people - for example, the professional community or the population of a city/region/country. The reason for this is the many barriers to learning. It is not uncommon for group learning processes to drag on for years, decades, or even centuries. The learning process takes time. But it is also difficult for objective reasons, the main ones being the dynamic complexity of the world around us, limited

information, and the limited rationality of human thinking. The source of the problems of understanding complex systems is:

1. Dynamic complexity is one of the main factors that make it difficult to understand the behavior of complex systems. The reasons for the phenomenon of the dynamic complexity of systems include the following:

Dynamics of change: everything changes, but at different rates. When the rates of change of different systems overlap and overlap, problems may arise (e.g., stars accumulate energy for billions of years but burn up in seconds; the market may be stable for decades but "collapse" in a few hours). The elements of the system are closely related to each other and to the outside world - changes in one element entail hard-to-predict changes in the other elements.

Feedback: Elements of the system, interacting, provoke further changes that change the entire system. A new state of the system leads to a change in its behavior and simultaneously changes the nature of the interaction of its elements, which manifests itself in a new round of changes (for example, the water turns into ice, acquiring new properties);

Non-linearity of processes: the complexity of predicting the behavior of the system is due to the impossibility of simple extrapolation of its behavior trend in the past.

Path dependence: the choice of one path predetermines the probability of choosing other paths as well (the concept of "path dependence" - initial decisions influence subsequent ones, setting the boundaries of the trajectory of further development). The past predetermines the course of the future.

Adaptability of systems: over time, changes in the behavior of complex social systems occur. What it will be and whether it will be at all is difficult to predict.

Counterintuitive, non-obvious behavior of systems: cause and effect are strongly separated in time, which makes it difficult to identify them. Highly effective actions are often not obvious at first glance.

Resistance: the complexity of the systems within which we operate often exceeds our analytical ability and capacity to recognize and manage them effectively.

2. Limited information - our thinking perceives information through all kinds of thought (mental) filters in many ways selectively and irrationally. Besides, the reality is that in almost any case of making a managerial decision, it is impossible to collect complete information about the situation.

3. The limited possibility of rational thinking. Emotions, reflexes, subconscious processes, and other rational and irrational factors influence our ability to interpret, process, and operate on information. Numerous studies show that even a small increase in the level of complexity instantly renders a person incapable of responding adequately.

This was first pointed out by Herbert Simon in the late 1950s. He formulated the principle of "bounded rationality". According to this principle, our minds are unable to grasp the full complexity of the problem. As a result, when faced with the reality of having to make complex decisions, people greatly simplify reality. The behavior of the average person (contrary to the point of view common in economic theory), firstly, is not strictly rational, and secondly, is not able to cope with even a slight increase in complexity [16, pp. 89-90]. Limited rationality results in:

- people's usual mental models (stereotypes) oversimplify the picture;
- an ordinary person cannot assess the dynamics of even the simplest effects in his mind.

The problem of the housing and utility sector in Ukraine is that complex system is like an iceberg: what is visible on the surface is only a small part of the whole. Participants of relations in the housing and utilities system can only slightly influence the system if corrective measures take place at the level of visible events (the surface level). To solve the problems of improving the efficiency of management of the enterprise housing and communal services in Ukraine based on the study of mental models of its participants, the authors conducted a social survey of respondents in Ukraine to determine the mental models of the participants of relations in the sphere of housing and communal services in Ukraine.

Research objectives: to consider the mental models of the participants of the housing and communal services market in Ukraine, to analyze their potential impact on economic behavior, on the implementation of strategies of economic agents of the housing and communal services market, and to propose a model of regulation of the housing and communal services market, adequate to the mental models of its participants. As part of the study, the authors defined the framework of the cognitive hexagon of the participants of relations in the sphere of housing and communal services in Ukraine (Figure 1) to explain the specifics of decision-making and behavior of the individual as an element of systems of different nature.

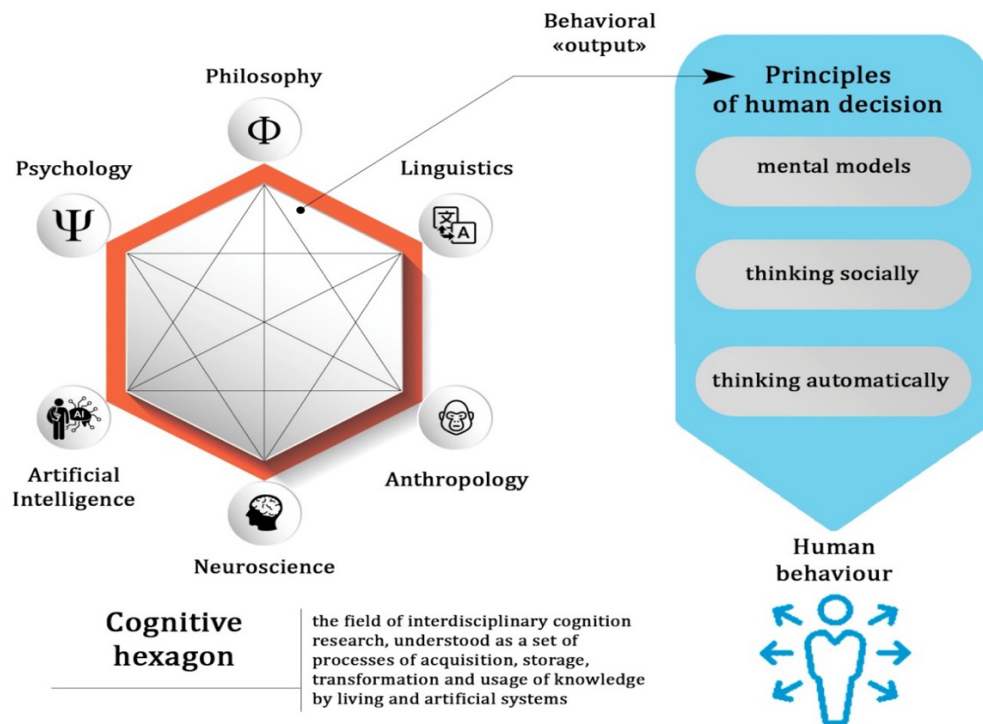


Fig. 1. The framework of the cognitive hexagon.

One of the reasons for the increased attention to behavioral sciences was the cognitive revolution, which resulted in the emergence of a field of interdisciplinary research. J. Miller (1920–2012), one of the founders of cognitive science, together with his colleagues identified six main disciplines, the development of which initially formed its basis:

- Experimental cognitive psychology.
- Philosophy of mind.
- Neuroscience.
- Cognitive anthropology.
- Linguistics.
- Computer science and artificial intelligence [17, pp. 141-144].

Currently, cognitive science is a field of interdisciplinary cognition research, understood as a set of processes of acquisition, storage, transformation, and usage of knowledge by living and artificial systems. [18, pp. 31-37]. One of the practical “outputs” of the studies, which are conducted within the framework of the cognitive hexagon, is a behavioral one, as the identified patterns allow to explain the

specifics of decision-making and behavior of an individual as an element of systems of different nature: social, political, economic.

In the study, the authors show the dependence of features of informal institutions (in particular, the culture of society) and mental models of participants in the sphere of housing and communal services using the Hofstede Indicator (Tab.1). Hofstede's cultural dimensions define Ukraine as a country with a rather low level of individualism (25 points) is shown in figure 2 [19].

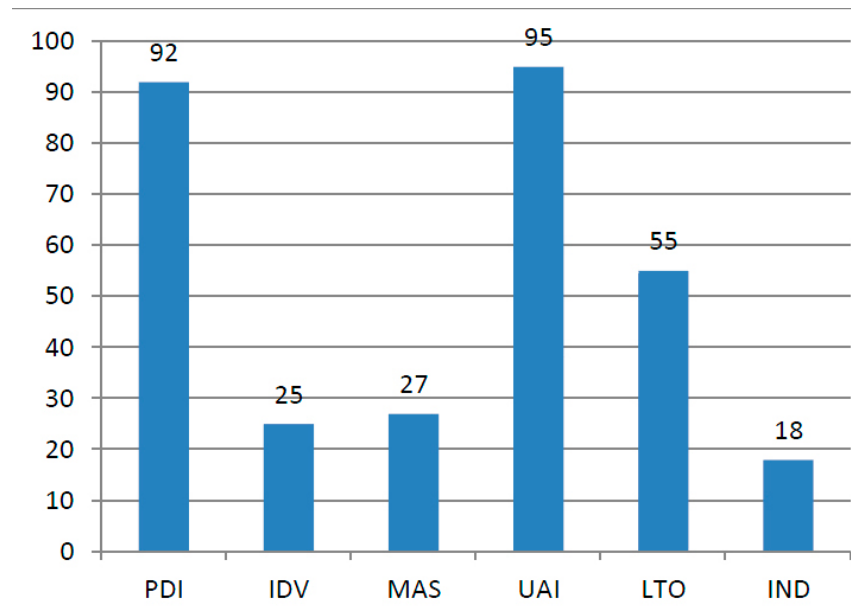


Fig. 2. Hofstede dimensions of national culture, Ukraine.

APPENDIX

Table 1. Correlation (n Person) Between Eight-Item BZSG (Citizen Scores) and Other Cultural Dimensions. Also, With GDP as Controlling Variable (for Citizen Scores), in n Countries

Dimensions	BZSG	n	GDP controlled
Hofstede (1980)			
Power distance	.270	29	.060
Individualism-collectivism	-.515	29	-.531

Source: Hofstede Indicator [19]

The indicator "individualism-collectivism" is negatively correlated with the indicator "belief in the Zero-Sum Game. The higher the level of individualism in the culture of the country, the fewer citizens are inclined to rely in decision-making on the cognitive model, characterized as "Zero-Sum-Game".

Based on the indicators of the culture of Ukraine, where the level of individualism is quite low (25 points out of 100 possible), we can assume that the BZSG indicator will have a rather high value (Tab. 2)

Table 2. Sample Information in 37 Countries, Subjective Socio-Economic Status (SES) and BZSG

	Sample size	Female %	Age <i>M</i>	Language of research	SES subjective <i>M</i>	GDP US\$	BZSG <i>M</i>
Angola	219	46	23,47	Portuguese	3,52	2,76	4,90
Argentina	98	60	24,72	Spanish	5,06	4,73	3,60
United Kingdom	163	81	20,1	English	4,68	44,1	3,52
Ukraine	311	68	18,75	Ukrainian	4,14	1,76	4,17
United States	454	66	23,04	English	5,29	41,8	3,31
Vietnam	93	59	20,37	Vietnamese	4,34	630	4,23
<i>M</i>	166	62,5	21,57		4,48	15	3,61

Note BZSG = Belief in a Zero-Sum Game; GDP = gross domestic product. GDP per capita in \$ (Source: United Statistics Division, 2006) [18]

The value for Ukraine is 4.17 points (on a 7-point Likert scale). Participants filled out all scales in one package, and answers to all questions ranged from 1 (disagree) to 7 (agree). That is, the value of the BZSG indicator for Ukraine is above average (Tab. 3) [20, pp. 525-548].

Table 3. Items of the BZSG Scale. Item Zero-Sum Game Belief Scale

Indicator	Average score (5-point Likert scale)
1	2
1. Successes of some people are usually failures of others.	2,38
2. If someone gets richer, it means that somebody else gets poorer	2,85

3. Life is so devised that when somebody gains, others must lose.	3,32
4. In most situations, the interests of different people are inconsistent.	3,24
5. Life is like a tennis game - A person wins only when others lose.	2,76
6. When some people are getting poorer, it means that other people are getting richer.	2,94
7. When someone does much for others, he or she loses.	2,56
8. The wealth of a few is acquired at the expense of many.	3,91
9. When a person does much for the good of others, he or she profits as well.	3,15
10. Those who give much to others receive much from them.	3,65
11. People who do much for their own good frequently benefit others as well.	3,32
12. When the number of rich people increases in the country, the poorer people benefit as well.	3,65
BZSG	3,14

Source: compiled by the author based on an online survey of the residents of Ukraine and calculated considering belief in a Zero-Sum Game as a Social Axiom [20]

To further investigate the mental models of participants in the housing and utilities market in Ukraine, let us turn to the indicator "social complexity" from the set of social axioms (Tab. 4).

Table 4. A measure of "social complexity" from a set of social axioms

Indicator	Mean value (5-point Likert scale)
1	2
1. There is usually only one way to solve the problem.	2,97
2. A person's behavior may be contrary to their true feelings.	2,62
3. A person's behavior changes depending on social conditions.	2,41
4. Religion causes people to run away from reality.	1,82
5. Failure can make people wiser.	2,41
6. People can suddenly lose everything they have.	2,94
7. Human behavior is influenced by many factors.	2,79
8. Different versions of the same reality can be true.	2,41
9. Each person is unique.	2,94
10. Social problems are rarely simple and easy to solve.	2,18
11. Many things seem much more complicated than they are.	1,18
12. Good people usually bear losses.	1,82
13. Flexibility has nothing to do with success.	1,94

14. Praise is just a flattering way for people to get what they want from others.	1,03
15. Life will not improve even if you know people with power.	2,12
16. Religion makes people good citizens.	0,97
17. People with different opinions can be right to the same extent.	2,44
18. One set of rules can apply to most situations.	1,56
19. Seeing different ways to achieve a goal is important.	2,62
20. Religion leads to unscientific thinking.	1,74
21. People can behave completely differently in different situations.	2,53
22. A bad situation may suddenly turn into a great success.	2,62
23. Being flexible in life is the way to happiness.	2,12
24. A person's appearance reflects his character.	1,32
25. A person can change radically in a short period.	2,12
26. A person is either good or evil, and circumstances have nothing to do with it.	2,35
27. A person is either good or evil, and circumstances have nothing to do with it.	1,76
Social complexity	2,14

Source: compiled by the author based on an online survey of the residents of Ukraine and calculated considering the indicator "social complexity" from the set of social axioms [21]

The higher the index of social complexity, the greater the ability of members of the social system to solve problems cooperatively, as well as to cope with existing difficulties in a constructive way (Tab. 5) [21, pp. 425-436].

Table 5. Correlation between social axioms and behavioral variables

	Social cynicism	Reward for application	Social complexity	Fate control	Religiosity
1	2	3	4	5	6
Vocational interest					
Conventional	0,10	0,12	-0,05	-0,03	-0,15*
Enterprising	0,12	0,05	-0,01	0,04	-0,09
Artistic	0,05	-0,09	-0,03	0,00	-0,00
Investigative	-	-	-	-	-
Social	-0,15*	0,23**	0,14	0,07	0,22**
Conflict resolution					
Accommodation	0,02	0,33***	0,09	0,13	0,31***
Competition	0,22**	-0,01	-0,09	0,05	0,09

Compromise	-0,11	0,15*	0,18*	0,11	0,10
Collaboration	-0,14	0,17	0,22**	0,05	0,04
Avoidance	0,06	0,06	0,09	0,14	0,09
Coping strategies					
Problem solving	-0,03	0,15*	0,22*	-0,07	0,04
Distancing	0,07	0,07	0,02	0,15*	0,01
Wishful thinking	0,23**	-0,06	0,06	0,22*	0,03
Support and ventilation	-0,02	-0,02	0,09	-0,02	0,05

N = 180, *p < 0,05, **p < 0,01, ***p < 0,001. Source: compiled by the author based on an online survey of the residents of Ukraine.

According to the results of the survey, the value of the BZSG indicator for Ukraine was 3.14 points (above average), and the value of the indicator "social complexity" was 2.14 points (below average). This indicates that the mental models of the participants of the housing and utilities market in Ukraine are not conducive to the generation of strategies for economic cooperation. Both producers and consumers of housing and communal services, based on the results obtained, tend to choose destructive models of economic behavior, namely:

- on the part of service producers: corruption, exaggeration of tariffs, provision of low-quality services;
- on the part of consumers: delays in payment for services, illegal ways of minimizing the cost of services.

Under such conditions it is impossible to take over directly the models of organization of the market of housing and utility services, successfully functioning in the EU countries. There are two basic ways of regulating the market:

- "As is", considering the existing models. The basic methods of regulation: repressive. This approach will yield a short-term positive effect but is counterproductive in the long run.
- "As it should be". Influence on the mental models of market participants. The focus: the young generation and small communities (at the level of territorial communities). Training programs and consulting projects.

Under the conditions of limited financial resources due to both the global decline in activity and the state of the national economy, when the formation of funds is difficult, the mental models of participants in the housing and utilities sector will be the basis for maintaining sustainability. Alongside the above, there are other problems concerning labor efficiency in the housing and utilities sector. Newly hired workers with insufficient work experience in this field must be trained, which requires significant time and money. There is a low level of education; workers with secondary special education make up a large proportion of this group, which has a negative impact on the efficiency of organizations and delays adaptation to new economic conditions. It should be noted that due to the lack of a system of specialized educational institutions, personnel recruitment in the organizations of housing and communal services is made from related specialties, except for the lowest working positions, which are not required to have a high level of education and any experience, such as janitors, concierges, etc.

At the same time, for management personnel, technicians, engineers of housing and communal services, the lack of opportunity to obtain additional professional education, is a significant disadvantage and negatively affects job satisfaction, as well as its effectiveness. The weak material base, difficult financial and economic situation does not allow housing and utility organizations to hire highly qualified personnel. Experts agree that to improve the situation in the housing and utilities sector it is very

important to provide this sector with well-trained specialists, managers with professional education who are competent and educated enough to develop modern professional standards, prepare a methodological basis for personnel management considering the specifics of the housing and utilities sector. One of the most painful problems is a high rate of staff turnover in organizations. It arises for various reasons, the most significant being:

- the lack of prestige of the job: young specialists, highly qualified and experienced workers consider work in the housing and utilities sector organizations of little interest, not promising;
- they regard it as a temporary option until they find a more suitable job;
- low wages: in the personnel structure of housing and utility organizations, most are workers, engineers, and technical specialists, but their level of wages is much lower than that of the management personnel;
- wages in the housing and utility sector are not competitive compared to those in other regions of the country.

Let us briefly consider the methods of impact on personnel, they are represented by three groups: administrative, economic, social-psychological. By means of administrative methods the personnel, as an object of management, has a direct impact through legal acts, regulations, instructions, orders, directives, and other official documents in the organizations of housing and communal services. These methods are aimed at maintaining labor discipline, establishing the content of job responsibilities and the order of their performance, determining the relationship between the structural subdivisions of the organization, etc. As a rule, they are mandatory for all employees of the organization or a certain range of employees, which is indicated directly in the document. With the help of economic methods, material incentives for employees are carried out.

These methods are represented by the following systems - material incentives (salaries, key performance indicators, bonuses, profit participation, etc.), responsibility for the results of labor, and quality of work performed (fines, deductions, etc.). Social-psychological methods relate to social, moral, and psychological factors of influence on the personnel. They act through intangible motivation, standards of behavior established and approved by society, the collective of the organization, creating a favorable psychological climate for workers, creating a corporate culture, etc.

This includes social payments for the employees of the enterprise, which, although they are a material incentive, are based on psychological factors. For example, supplementary payments for the length of service, financial aid, gifts for employees' children, etc. Socio-psychological methods affect the personality of workers with the help of psychological techniques. Thanks to them, the staff is more willing to perform official tasks, job duties, orders of the administration and management. Employees have an internal interest in the success of the entire organization.

In the housing and utilities sector, the management gives preference to material methods of motivating employees, forgetting about the need to support and strengthen their impact with intangible incentives. People have a need not only for wages but also for recognition, respect, acceptance, self-affirmation, understanding, etc. If you use only material incentives, it will be impossible to involve moral, social, psychological factors of influence, and this will reduce the effectiveness of the entire incentive system. Material and non-material incentives complement and reinforce each other.

A balanced motivational package for housing and utility employees should include:

- a guaranteed salary;
- a flexible system of additional payments, which are calculated based on the achievement of specified performance indicators of the employee, his structural unit, and the entire organization;
- non-material incentives to increase labor satisfaction, formation of loyalty to the organization, psychological comfort in the workplace, etc.

3. CONCLUSIONS

When developing a system of motivation, we should consider the fact that all people have different attitudes to work, all have different needs. It is impossible to develop a system of motivation that will be equally suitable for managerial staff and employees of working professions. Therefore, it is necessary to combine material and non-material incentives, considering the needs of different personnel groups. Thus, we can conclude that the solution to personnel problems in housing and utility organizations should begin with the development of an optimal motivation system that harmoniously combines administrative, economic, social, and psychological methods of influence.

The success of any organization depends on the degree of motivation of workers, the organizations of housing and communal services are no exception. The use of material and non-material incentives, wages, a flexible incentive and compensation system, an adequate social package, the organization of decent working conditions - all this allows the most effective use of labor resources, increasing productivity and the quality of services provided. In conditions of economic and financial instability of the economy, considering the low attractiveness of housing and communal organizations as employers in the labor market, such a balanced approach will help retain qualified employees, reduce the turnover rate, improve the effectiveness of the organization.

In the consciousness of inhabitants of Ukraine economic development of the sector of housing and communal services and its fruits are directly connected with affiliation to power, at that person themselves do not believe in the possibility of self-realization in the economic sphere, that is individual energy, efforts of self-realization practically "do not work" for economic development, are not demanded in modern Ukrainian economic and social life.

The study showed that the cultural peculiarities of Ukraine more contribute to the collective (national) model of economic development. However, the unclaimed personal energy and self-realization significantly hinders the accelerated economic development and is a powerful barrier to the innovative development of the economy of Ukraine. Hence, it is necessary to develop socio-economic institutions in Ukraine so that people can overcome cultural and psychological barriers and take the risk and responsibility for their own economic well-being.

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