
CHAPTER «STATE ADMINISTRATION»

FORMATION OF THE QUALITY MANAGEMENT SYSTEM OF THE POPULATION WITHIN THE FRAMEWORK OF THE EVOLUTIONARY PARADIGM

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Abstract. The most topical issue in the aspect of public administration is the formation of a quality of life management system for the population. The presented section of the monograph is devoted to this topic. The formation of open complex dynamic systems, which are the basis for the formation of both social and economic systems, are considered. The idea of the synthesis of scientific knowledge, which unites the evolutionary and systemic approaches into a single whole, is used. On the basis of this, it is proposed to single out the adaptation mechanisms affecting the system, as well as the immanent and controlling properties of the system. It is established that the evolution of the system is determined by variations of adaptive, controlling and immanent properties. The main variations are analyzed and it is established that the concept of “quality of life” depends on the variant of the interaction of these system parameters. The functional is determined, which determines the dependence of the quality of life on the variation of parameters. Four main types of the state of the individual and society are grounded within the concept of “quality of life”. The first state is “well-being – satisfaction”. Characterized by the fact that the quality of life is becoming one of the basic social values. The second state “trouble – satisfaction”. It is typical for situations when the lack of objective conditions for improving the quality of life is perceived as optimal and satisfactory. State of the third – «trouble – dissatisfaction». It is characterized by a lack of objective conditions of quality of life and the corresponding subjective

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dissatisfaction. The fourth state is well-being – dissatisfaction. It is characteristic of many economically developed countries with a high level of material well-being. The management process in each of the described situations requires a separate set of methods and technologies of public administration, which are used at different levels of the system of government and local government. In general, the proposed complexes are the strategies of public administration, reflected in this monograph.

1. Introduction

The main conceptual provisions that specify the regularities of the functioning of the object of management and the possibility of implementing managerial influence in the process of forming the state mechanism of quality management of the population, is the position of the system approach and the laws of the evolution of complex open systems, united within the framework of the system-evolutionary paradigm.

The post-classical stage of the development of science has provided opportunities for enriching humanity with knowledge and concepts about the regularities of the development of complex open dynamic systems not only physical and chemical, but also biological, social, and economic. The phenomena of openness, nonlinearity, dissipative data of systems are studied. At the stage of post-classical science, the idea of the synthesis of scientific knowledge – the desire to construct a general scientific picture of the world based on the principle of universal evolutionism, which unites into a single whole the ideas of system and evolutionary approaches, becomes the leading one. The concept of universal evolutionism is based on a certain. The concept of universal evolutionism is based on a certain set of knowledge gained within specific scientific disciplines (biology, geology, etc.) and at the same time includes in its composition a number of philosophical and ideological settings. More often universal, or global, evolutionism is understood as a principle that provides extrapolation of evolutionary ideas to all spheres of reality and consideration of inanimate, living and social matter as the only universal evolutionary process. The system approach introduced a new meaning in the concept of evolutionism, creating an opportunity to consider objects of real reality as systems capable of self-organization. So, to this moment, knowledge of humanity about the laws of the development of social systems have made a great leap, which is appropriate to consider in the theory of management of these systems, including in the theory of public administration.

The program of building the general theory of systems in the XX century is expanded. was nominated in the late 40's – early 50's by well-known biologist-theorist Ludwig von Bertalanffy.

L. von Bertalanffy successfully applied a systematic approach to the study of biological processes, and after the Second World War, he proposed the concept of developing a general theory of systems. In the program of building a general theory of systems Bertalanffy pointed out that its main tasks are: 1) the identification of general principles and laws of behavior of systems, regardless of the nature of the constituent elements and relations between them; 2) establishment as a result of the systematic approach to biological and social objects of laws similar to the laws of natural science; 3) the creation of a synthesis of modern scientific knowledge on the basis of the isomorphism of the laws of various spheres of activity [1, p. 10].

Today, the main areas of systematic research are systemic approach and specific scientific knowledge about systems.

Like any fundamental notion, the term «system» is best specified in the process of considering its basic properties. V. N. Spitsnadel [2] distinguishes four of these properties :

1. The system is, above all, a set of elements. Under certain conditions, elements can be considered as systems.

2. The presence of significant connections between the elements and (or) their properties, superior to the power (strength) of the connection of these elements with elements not included in this system. Substantial connections are those that are logical, with the need to determine the integrative properties of the system. This property distinguishes the system from a simple conglomerate and allocates it from the environment as a holistic object.

3. The presence of a certain organization, manifested in the reduction of thermodynamic entropy (degree of uncertainty) of the system in comparison with the entropy of system-forming factors that determine the possibility of creating a system. These factors include the number of elements of the system, the number of significant connections that can have an element, the number of quanta of space and time.

4. The existence of integration properties, that is inherent in the system as a whole, but not inherent in any of its elements separately. Their presence shows that the properties of the system though depend on the properties of the elements, but they are not completely determined. Conclusion: the system is not limited to a simple set of elements, and, by partitioning the

system into separate parts, it is impossible to know all the properties of the system as a whole [2].

Thus, in the most general case, the concept of «system» is characterized by: 1) the presence of elements; 2) the presence of links between them; 3) the integral nature of this object or process, which consists in the presence of the integration properties of the elements that appear in their interaction.

It should be noted that the concept of global evolutionism emphasizes the most important pattern – the direction of development of the whole world to increase its organization. The entire history of the universe appears as the only process of material evolution, self-organization, and self-development of matter.

An important role in the concept of universal evolutionism is the idea of selection: a new emerges as a result of selecting the most effective formations, ineffective same innovations are rejected by the historical process; A qualitatively new level of organization of matter is finally self-affirming when it manifests itself capable of absorbing the previous experience of the historical development of matter. This pattern is characteristic not only for the biological form of motion, but also for the entire evolution of matter. The principle of global evolutionism requires not only knowledge of the temporary order of formation of levels of matter, but a deep understanding of the internal logic of the development of the cosmic order of things, the logic of the development of the universe as a whole. Today, the idea of global evolutionism is not only a statement of the situation, but also a regulatory principle. On the one hand, he gives an idea of the world as an integrity, allows us to think the general laws of being in their unity, and on the other hand – the modern science focuses on revealing the specific laws of the global evolution of matter at all its structural levels, at all stages of its self-organization [3].

The provisions of the system approach and global evolutionism within the framework of this study constitute the conceptual basis for the formation of a state mechanism for managing the quality of life of the population.

2. Systemic aspect of the conceptual approach: definition of «quality of life»

It is known that the quality of life of the population is a category derived from the standard of living, which reflects not only the material side of society's life, but also social and ecological, entering into a set of criteria for assessing the sustainability of economic growth and development.

Consideration of the object of research as a system involves the allocation of a finite number of parameters that characterize the nature, nature of this object. It is followed by ordering the system at the macro level, so they can be called immanent properties (IP), or «driving forces» of the evolution of the system.

Note that the basis for determining the status of a parameter is the nature of the properties of elements, the integration of which contributed to its formation. As a result of the integration of the internal properties of the elements, the order parameters are formed, the purpose of which is to preserve the so-called «hereditary» information that is transmitted to the system when it passes from one stage of evolution to another. Moreover, the set of immanent properties is significant, that is, a system-forming factor if and only if they are realized simultaneously [4]. In the event that the system changes the immanence of properties as parameters of order, one can speak about its destruction, or about the degeneration into a fundamentally new system.

As a result of the interaction of the system with the external environment at the stage of its formation, the parameters are initially formed, and then the parameters that perform the function of adaptation of the system to the change of the influence of the environment or adaptive mechanisms (AM) are allocated. Adaptation assumes the ability of the system to change its structure, quality and function in response to the changing influence of the external environment.

In addition to the parameters of order, one should consider one more determinant of the state of the system – control parameters (CP), with special attention should be paid to the nature of the emergence of CP. Some experts in the study of system behavior are limited to the definition of «external influence». In the theory of bifurcations, the controlling parameters of systems of arbitrary nature are «parameters that can qualitatively influence the properties of solutions of the differential equation» [5], which describe the dynamics of this system. In general, the control system parameters are a subset of parameters, before changing any of the values of which the system has an increased sensitivity. Thus, we will consider the KP as the variables of the state of the system, those that belong to it and determine its dynamics, which is the result of external influences. In essence, the control parameters are the characteristics of the system, which can have external influence, and which change the behavior of the system, its state.

Thus, the actual relationship between the AM of the system (its adaptive mechanisms) and the control parameters (which, in turn, are formed under the influence of the external environment) determines the state of the system.

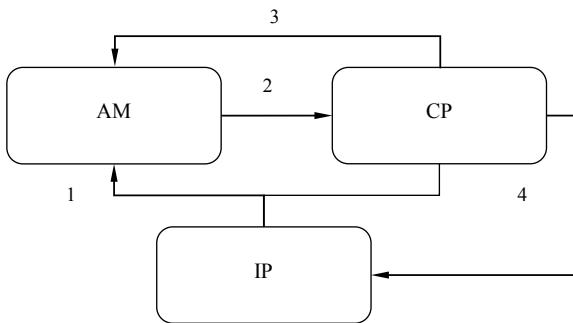
The evolution of the system is noted by the nature of the links between the IP, AM and CP, which are formed in the processes of the emergence, stabilization and adaptation of the system to the external environment (Figure 1).

1 – is a connection in which the overall effect of the IP and CP is a determinant of the values and status of the AM, when the core of the system generates adaptation mechanisms based on the purpose of its existence, adjusting them taking into account external influences. In other words, the implementation of this connection involves the allocation of a group of stable parameters of the system that have a high sensitivity to external influences, that is AM. This type of connection determines the formation of the system and its stabilization in the current environment environment;

2 – the connection, as a result of which the adaptive mechanisms carry out the structure-forming influence on the control parameters of the environment. This type of connection is defined as a feedback;

3 – a connection that characterizes the formation and correction of adaptation mechanisms of the system (AM) under the influence of the external environment. The process, which is characterized by this type of connection, is called adaptation;

4 – the connection in which the external environment through the control parameters of the CP influences the inherent properties of the system, it is possible in cases of «phase transitions» when the stability of



the system is lost, due to the inability of the adaptation mechanisms to respond to the external environment.

So, consider the parameters of the order of the system as a prerequisite for the formation of the concept of «quality of life». For this purpose, it is advisable to refer to the notion of personality as such.

Figure 1. Relationships between the parameters of the order of the complex open system:

- IP – immanent properties;
- AM – adaptation mechanisms;
- CP – control parameters.

Source: proposed by the author

In the framework of the proposed approach A.M. Leontiev formation of personality – the same as that of his birth. However, according to A.M. Leontiev, the person is born twice. In the first birth, immediate inducements begin to obey social norms, in the second – the person (the teenager) begins to realize and subjugate their motives. Already, not only the motives are managed by a person, but she can manage her own motives.

In the terms of this definition, the person has direct motives, which are determined by its inherent properties and social norms, which are assimilated in the process of socialization and are caused by the influence of control parameters. At the second stage of the person's birth, it forms adaptive mechanisms, taking into account not only the influence of the external environment, which is carried out through the control parameters, but also the characteristics of the nature of the system itself, which reflect its essence. They are determined in systematic terms as immanent properties – invariant parameters inherent in the system from birth.

In the case of a person to immanent properties, it is expedient to include the following:

- x1 – cognitive features;
- x2 – affective features;
- x3 – physiological features.

It is important to note that the allocation of the structure of immanent properties of the system in this case is the task of choosing the theory of the structure of the person, suitable for the tasks of the researcher. Given the diversity of theories of the structure of the individual, within the framework of this study it is sufficient to allocate macroparameters based on the cognitive-affective theory of personality and to consider the biological component as a physiological.

The combination of these properties is a kind of genotype, which defines the limits of personal adaptation to the effects of the environment. The list of characteristics included in the genotype, is a certain predetermined program, according to which the formation and development of personality occurs. In terms of psychology, the inherent properties of a person are determined by innate features, which include abilities, inclinations, and other persistent features due to the characteristics of the nervous system, which are given at birth.

In turn, the controlling parameters, the effects of which the resulting quality of life parameters are of increased sensitivity, are:

- a1 – environmental (natural) environment;
- a2 – economic environment;

a3 – social environment.

a4 – socio-political environment.

It should be determined that all of these criteria together identify the person. Therefore, the influence at least one of them leads to a change in the structure of needs, to the correction of the implementation of predetermined characteristics.

Adaptation mechanisms are determined by inherent properties and controlling parameters, and are more sensitive in the temporal aspect to the change of the CP.

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These include the characteristics that determine the ability to meet the needs associated with the choice of personality and its status:

g1 – professional orientation (education and profession);

g2 – marital status;

g3 – community participation and social status;

g4 – place of residence;

g5 – is a way of life.

In the process of self-determination, the individual carries out several basic choices that determine the further characteristics of his life, setting the limits of his possible adaptation, the so-called «evolutionary corridor.» These strategic decisions include: the choice of the profession as the basic positioning in the status-role structure of society; marital status; Participation in communities that allow adjusting the status of a subject due to his professional and family positioning; as well as a way of life. Despite the fact that the parameter «lifestyle» is largely set by the above parameters – professional characteristics, family status and social groups, within its framework is the possibility of free choice of personality. In general, the presented set of adaptation mechanisms of order is characterized by their interdependence. In view of the above, the concept of «quality of life» can be defined in terms of the system approach in this way (Figure approach in this way (Figure 2).

Within the framework of the proposed approach, quality of life is determined by the feedback of two types: 1) the conformity of the formed adaptation mechanisms (AM) to the immanent properties of the system (IP), which is perceived subjectively; 2) conformity of adaptation mechanisms

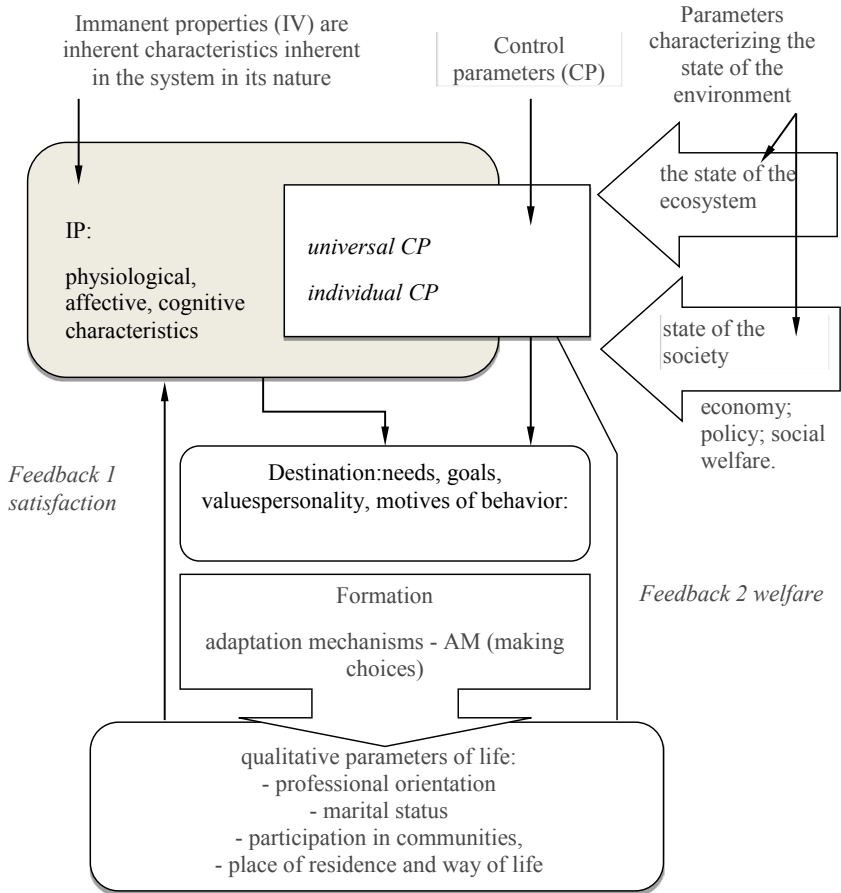


Figure 2. Quality of life of the individual as a set of types of feedback

Source: proposed by the author

(AM) with objectively existing characteristics of the influence of the external environment on the system (CP). The first type of feedback can be characterized as satisfaction or subjective well-being, when the profession, marital status, social status, etc., correspond to the inherent properties of the individual («I» – the social corresponds to «I» – to the real one). And the second type of feedback determines objective well-being, which is

characterized by universal standards, standards for the biological species, and for the social system under consideration.

An integral indicator that characterizes the quality of a person's life as a degree of satisfaction of its needs can be represented as the target functional of the species:

$$Y = F(g_j(x_i, a_k)) \quad (2.1)$$

where:

Y – quality of life;

x_i – inherent properties of the system (physiological, affective, cognitive characteristics of the personality);

a_k – керуючі параметри (стан екосистеми, стан соціуму);

g_j – механізми адаптації особистості.

Thus, within the framework of the system approach, quality of life is determined by the feedback of two types: 1) is subjectively perceived as the conformity of the formed adaptation mechanisms (AM) to the immanent properties of the system (IP), and also 2) the conformity of adaptation mechanisms (AM) with Presently, the characteristics of the influence of the external environment on the system (CP). In general, quality of life is an integral indicator that characterizes the level of influence of the environment on the process of survival and development of the person, expressed in terms of «austerity – troubles».

The main indicator of the objective component of quality of life is the indicator of the expected life expectancy of the population. Expected life expectancy is an indicator of the average life expectancy of a group of people born in one year, if mortality in each age group remains unchanged. It is important to note that all indicators, which are usually taken into account in the system of monitoring the quality of life, are summed up in an objective indicator of life expectancy, achievement of high values which is impossible without favorable economic, social and environmental impact.

So, according to 2017, the largest indicators of life expectancy were demonstrated by countries such as: Monaco – 89.52 years, Japan – 84.74, Singapore – 84.68, Macau – 84.51, San Marino – 83.24, Iceland – 82.97, Hong Kong – 82.86, Andorra – 82.72, Switzerland – 82.50 [6].

The main indicator of subjective satisfaction with life is an indicator of the level of happiness, which manifests itself as a result of surveys of the population.

3. Rationalization of four types of states of personality and society within the concept of «quality of life»

There are four types of states of the individual and society as a whole, which characterize the mutual correspondence of the subjective and objective components of the quality of life (Figure 3).

Condition # 1: «Well-being – Satisfaction.» This situation for the individual and society as a whole is real and achievable in the case of active participation of members of society in the management of quality of life. The quality of life becomes one of the dominant social values and the ways of its achievement are transformed into a set of sustainable patterns of behavior shared by the majority (for example, a healthy lifestyle, quality of education, quality and ergonomics of the urban environment, etc.). This state is quasi-stable, as it is characterized by the mutual correspondence of the objective and subjective components of the quality of life.

Condition # 2: «Disadvantages – Satisfaction.» Characteristic for situations where the lack of objective conditions for improving the quality of life is perceived as optimal and satisfactory. This state of affairs is due to the lack of incentives for the development of personality and society as a whole and is unfavorable, restraining the progress of the social system under consideration. In any society, there are social groups that combine a low position in social stratification and a high level of satisfaction with life, but when this worldview becomes dominant and systemic, this indicates a lack of potential for social transformation and requires a special complex of administrative actions aimed at the formation of appropriate incentives. The main focus here is on the subjective component of quality of life, the correction of which will ensure the involvement of society in the process of improving the quality of life, and, therefore, ensure its effectiveness.

Condition # 3: Dissatisfaction – Dissatisfaction. The state of the lack of objective conditions of quality of life and the corresponding subjective dissatisfaction with them. Characterized by an adequate reflection of the state of things and the availability of potential for transformation in the form of dissatisfied needs of the individual and society as a whole. In such a situation, the complex of managerial influences within the framework of the state mechanism of quality of life management of the population is directed on regulation of the objective component of quality of life with the involvement of the potential of self-organization of members of society.

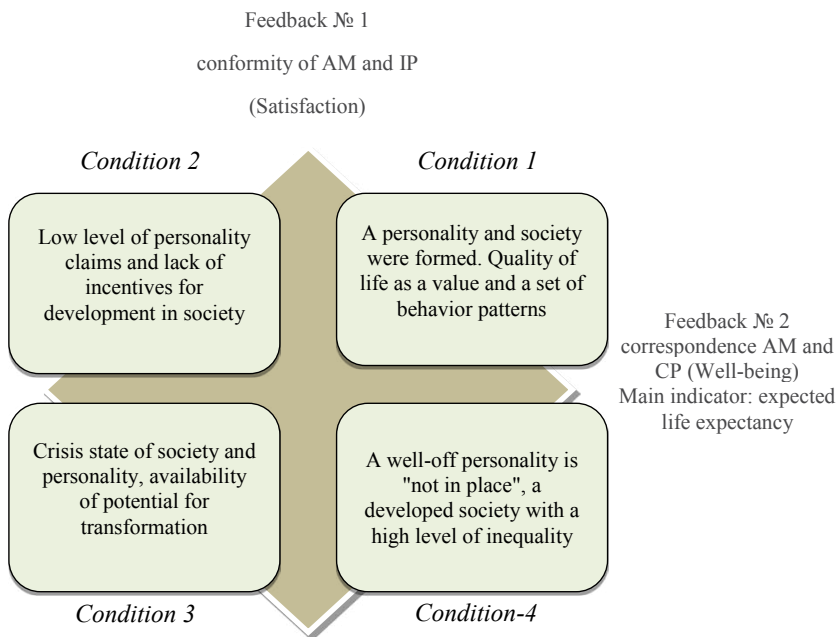


Figure 3. Matrix of mutual correspondence of objective and subjective components in the concept of «quality of life» in relation to man and society

Source: proposed by the author

Condition # 4: «Well-being – Dissatisfaction». The state is characteristic for many developed societies with a high level of material well-being, in which, at extreme manifestations of this trend, the birth rate is drastically reduced and the percentage of suicides increases. The phenomenon of dissatisfaction with material well-being is distinguished by the discrepancy between the state of the person and its immanent properties (the person «is not in his place»). The reasons for such a situation can be: high level of inequality in society and the lack of efficiently functioning vertical social lifts; tough social norms that allow you to make an individual choice in accordance with the vocation, low level of social capital as trust in this social system. In this case, the complex of managerial influences of the state mechanism of quality of life management should be oriented both on the subjective component, and

on the social environment and its significant characteristics, which determine the perception of the social well-being of the subject.

4. Formation of the proposed strategies of public management of quality of life of the population

Management in each of the situations described requires a separate set of methods and technologies of public administration that are applied at different levels of the system of public administration and local self-government. In a generalized form, these complexes represent the strategies of public administration:

the strategy of «harmonious well-being» is realized in a situation of satisfaction and well-being and is aimed at the coordinated development of these components of quality of life in the future;

the strategy of «forming incentives» is activated in a situation of satisfaction and disadvantage and involves the search and implementation of a set of incentives to stimulate self-organization of the population in the process of improving the quality of life;

the strategy of «self-organization and development» is typical for the situation of dissatisfaction and disadvantage, requires as a condition for the implementation of the minimum necessary level of trust in the social system (social capital). Realized with an emphasis on an objective component of quality of life with the active participation of civil society;

the strategy of «exit from depression» corresponds to the situation of well-being and dissatisfaction and is implemented with an emphasis on the subjective component and social environment, taking into account the problems identified by its organization (Figure 4).

The software detail of the presented strategies is carried out in the process of analysis of a particular social system and its dynamics.

5. Principles of management of quality of life of the population within the system-evolutionary paradigm

Taking into account the foregoing, it is possible to formulate the principles of management of the quality of life of the population within the system-evolutionary paradigm:

harmonization of the objective and subjective components of the quality of life (in accordance with matrix matched strategies). In particular, the state of dissatisfaction in terms of well-being and satisfaction in conditions

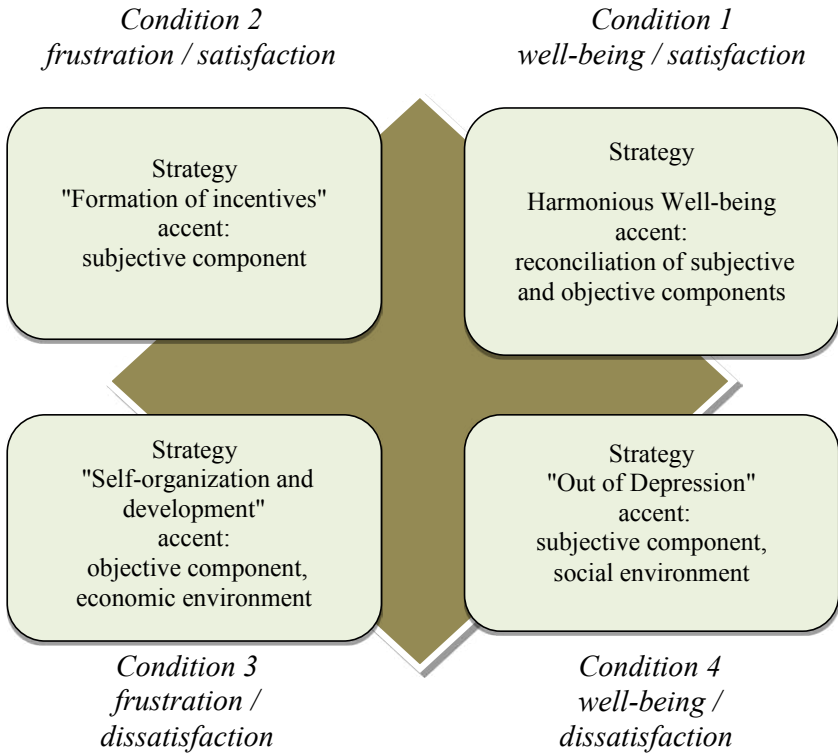


Figure 4. The strategies of public management of quality of life of the population, based on matrix of conformity of objective and subjective components

Source: proposed by the author

of disadvantage are considered undesirable in terms of the development of the social system, they have psychological and social roots that restrain development and therefore must be adjusted at the expense of the appropriate administrative influence;

the adequacy of methodical tools for the cyclical dynamics of the socio-economic system. A set of measures to improve the quality of life of the population should correspond to the actual and expected phase of development of the national economy, social system, the state of the ecological system. In this case, it will help to find the system in the

adaptation zone of development and the fast and most manageable passage of the system through the bifurcation zone of its development;

orientation of operational management to potential risks and weak links. Given the multifactorial nature of the quality of life management system, the management system, in the framework of each iteration at the planning stage, should determine the development priorities, concentrate efforts and accumulate resources in certain areas of improvement. For this purpose it is necessary to focus on the systemic principle according to which «the system is not stronger than its weakest link». However, the planning process should be not only reactive and take into account already existing weak links in the system, but also to predict the potential risks related to the negative impact of determinants on the quality of life of the population (for example, seasonal environmental events of varying degrees of urgency requiring attention);

the use of resonance management and the promotion of self-organization, which requires management not only objective, but also subjective component of the quality of life. This principle is aimed at maximizing the effectiveness of managerial influence through its resonance, coinciding with the goals, values, settings of individual members and groups of the social system. In these cases, it is possible to launch processes of self-organization of the population and to achieve the synergy effect, when the management process is intensified on the basis of self-governance and self-organization processes;

maximize the use of modern technological capabilities (media – surveys – startups – interactive programs). The modern digital revolution provides significant opportunities for improving the quality of life management processes through personalization, individualization of provided social services, receiving quick feedback on their quality and increasing access to them. Therefore, the modern system of quality of life management should use a complex of information and communication tools. to put the corresponding tasks (to create a startup – sites, to finance the development of interactive programs, etc.) in order to integrate new technologies into traditional tools for quality of life management.

6. Conclusions

Management of quality of life does not have the ultimate goal; it is a constant process of translational transformation of the results of economic growth into indicators of social development, which is implemented taking into account the principles of sustainable development.

It is established that the relationship between the parameters of the system IP, AM and CP is cyclical in nature and their variation determines the level of the concept of «quality of life». Within the framework of the proposed approach, quality of life is determined by the feedback of two types: the correspondence of the formed adaptation mechanisms (AM) to the inherent properties of the system (IP), which is perceived subjectively; conformity of adaptation mechanisms (AM) to objectively existent characteristics of the influence of the external environment on the system (CP).

It is substantiated that four types of states of the individual and society as a whole are defined, which characterize the mutual conformity of the subjective and objective components of the quality of life: well-being – satisfaction, disadvantage – satisfaction, disadvantage – dissatisfaction and well-being – dissatisfaction.

Management in each of the situations described requires a separate set of methods and technologies of public administration that are applied at different levels of the system of public administration and local self-government. In a summarized form, these complexes represent the strategies of public administration: it is the strategy of «harmonious well-being», the strategy of «forming incentives», the strategy of «self-organization and development» and the strategy of «getting out of depression».

The principles of quality of life management in the framework of the system evolutionary paradigm are formulated: harmonization of objective and subjective components of quality of life, adequacy of methodical tools for the cyclical dynamics of the socio-economic system, orientation of operational management to potential risks and weak links, use of resonant management and stimulation self-organization, maximizing the use of modern technological capabilities.

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