SOCIAL AND ECONOMIC DIMENSIONS OF MANAGEMENT OF THE ORGANIZATION MAKING PRODUCTS AND SERVICES

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ANNOTATION

The economic leadership of organizations is ensured by the accelerating flow of introduction of new process design solutions, and capability of efficient quality transformations that depend on the level of the socio-economic development of the external and internal environment.

The paper considers the problem of transition of the organizations making products and services to the paradigm of efficient and sustainable socio-economic development. The research enabled to reveal and scientifically substantiate the essence of the socio-economic development of the organization, and propose a relevant research and methodological approach, criteria, methods and tools of management.

The dynamic interests of the primary subjects of the organization were systematized depending on the phase of the external and internal environment development cycle. The authors' management concept is based on regulating the processes of the added value formation and distributionthat ensure the balance of interests of the enterprise owner and personnel, and achievement of the required development rates.

There was developed a theoretical model for managing the balance of interests based on provisions of the marginal utility theory, as well as the algorithm for elaboration of the enterprise development strategy involving the authors methodology of forming the target type of the

balance of interests, and methods for evaluating the efficiency and sustainability of the selected line of the organization's development.

A complex of simulating, heuristic and economic-mathematical models enablingto implement the mechanism of managing the socio-economic development of the organization based on correction of parameters was proposed. Based on the results of the economic-mathematical simulation the rational ratios of costs for satisfaction of social and economic interests of the primary subjects of the organization under various conditions of external and internal environment were established.

The most substantial directions for further study of the social and economic dimensions of managing the organization making products and services were stated.

INTRODUCTION
The goal of society development is to improve the living standards on the basis of increase in labor efficiency, predominance of the innovative economy sector with high clean technologies including the knowledge industry [1].

"The wealth generator" of the society is production organizations that:
– make products, services as well as the purchasing power to buy them;
– maintain the expansion of the social infrastructure and secure returns to capital;
– create jobs in-house, at suppliers and in public sector;
– Ensure their own growth and development.

Nowadays the leadership of one or another country is ensured by the accelerated flow of new process design solutions and arrangement of their intensive use, as well as by capability of efficient quality transformations that depend on the level of the socio-economic development.

The opportunities for the global economy to enter the path of sustainable development are associated with transition to the innovative model that should involve not only introduction of new technologies but also strengthening the role of the human factor. The underestimate of the functional role of the social component in the development of production organizations is manifested in the absence of methodological support for the development and implementation of a sustainable development strategy with the paths of changing parameters that ensure balanced satisfaction of the interests of all its subjects. The most important feature of the paradigm of the socio-economic development is the interconnected and contradictory unity of economic and social components, the optimal structure of which is dynamic and dependent on a combination of factors of the external and internal environment of the organization.

The objective of the study was to develop theoretical provisions and methods for managing the socio-economic development of the organization, ensuring its sustainable development in the short and long-term periods.

An object of research was the organization making products and services as a dynamic self-organizing and developing socio-economic system. A subject of research was the production relations, mechanisms and patterns of the socio-economic development of the production organization.

The most important source of knowledge in the field of managing the development of production organizations are fundamental and applied researches of domestic and foreign academic economists. The theory of development management is established in the works of N. D. Kondratyev, K. Marx, A. Marshall, P. Drucker and other scholars [2, 3, 4, 5, 6]. In these works the fundamentals of cyclic and sustainable economic development are presented, theoretical foundations of management are considered, and the theory of the innovative model of economy is formed.

The problem of securing sustainability and efficiency of the development of socio-economic systems is reflected in the papers of L.I. Abalkin, A.G. Aganbegyan, R. Ackoff, I. Ansoff, S.Yu. Glazyev, D.S. Lvov, P. Samuelson, J. Schumpeter and other [7, 8, 9, 10, 11, 12, 13, 14]. In these papers it is proved that for sustainable and efficient development of the production organization, it is necessary to transform all the basic elements of its structure; the achievement of the level of normal life activity is possible only on the basis of implementation of strategic development plans that are attractive and efficient for the owner of the enterprise, public authorities and personnel; a number of aspects of the theory of making managerial decisions under conditions of uncertainty are investigated.

Thanks to contribution of specified studies to the development of the management theory, a scientific and methodological framework has been created that allows settling a wide range of objectives in the field of tactical and strategic management of production organizations. At the same time many theoretical and methodological issues of the enterprises development management require an in-depth study. With respect to the production organization such issues are as follows: clarifying the concept of the "socio-economic development" for the enterprise, identifying the features and methods of managing socio-economic development under conditions of the innovative model of economy, determining the criteria for assessing the efficiency and sustainability of development, elaborating a method for assessing and forecasting the social and economic interests of the subjects in the development process. In this regard, the necessary step is to improve the theory, methods and principles of the development management based on close connection of economic and social factors, dynamic balancing of social and economic interests and the choice of effective mechanisms for their implementation. Resolving this scientific problem which is of great practical importance will enable to move to the innovative model of development and ensure the efficiency and sustainability of operation of production organizations in the long term.

MATERIALS AND METHODS

As a result of comprehensive studies of the activities of enterprises and organizations in the XXth century, a socio-economic approach has been formed correlating the economic processes with the development regularities of enterprises and organizations. The main idea of the approach is to recognize the inevitability of the economy socialization process that generally consists in enrichment of the controlled parameters of economic activity with social features, characteristics and goals.

The theoretical and methodological basis of the research was made up of the general principles of dialectics, basic provisions of the marginal utility theory, statements of the theory of socio-economic systems and systems development laws; scientific publications in the field of economy and sociology, enterprise development management; strategic management and human resources management. A combination of methods of a system, structural-functional, logical, factorial and statistical analysis was used in the paper.

The informational-empirical framework of the research includes the official data of the state and corporate statistical reporting, analytical reporting of companies; scientific and technical literature; materials of the international scientific and practical conferences, research reports of research institutes; initial materials and the results of studies conducted by the authors at a number of enterprises and organizations.

In order to achieve the objectives of the study a concept of the socio-economic development of the enterprise was considered which is an important theoretical provision allowing to state the methodological basis for the development process management and also to elaborate the criteria for its efficiency and sustainability [15]. The generally accepted definition of "development" uncovers it as a process and defines as a regular purposeful changing the object with the appearance of a new quality of its state [16].

The essence of the socio-economic development of the production organizationconsists in continuous improvement of the target-oriented and reasonably arranged activity of the personnel in the course of which the performance indicators of the organization increase and satisfaction of the growing interests of its subjects in the current period and in the long term is achieved.

Such interpretation enabled to distinguish two main attributes of the socio-economic development of the Production organization:

1) economic – reflects the performance growth;
2) social – reflects satisfaction of interests of its subjects.

If one of the above attributes is missing in the development process, that is, an increase in economic efficiency does not lead to satisfaction of the growing interests of its subjects, or interests are satisfied at the expense of economic efficiency, one cannot speak of the socio-economic development. An efficient so-

cio-economic development is fulfilled only on condition of the balance of its economic and social components [17].

Sustainability of the socio-economic development of the production organizationis considered as an ability to maintain the paths of improving the key performance parameters under changing conditions of the external and internal environment in the current period and in the long term. The key feature of the development sustainability is preservation of the possibility of satisfying the interests of future generations.

For the purpose of study of the socio-economic development regularities, a socio-economic system was established in the structure of the production enterprise which represents an ordered hierarchal set of the following elements: technologies and objects of labor; the capital (financial resources, fixed funds and objects of infrastructure); subjects cooperating in the production process to meet their dynamic interests in the current period and in the long term (Fig. 1).
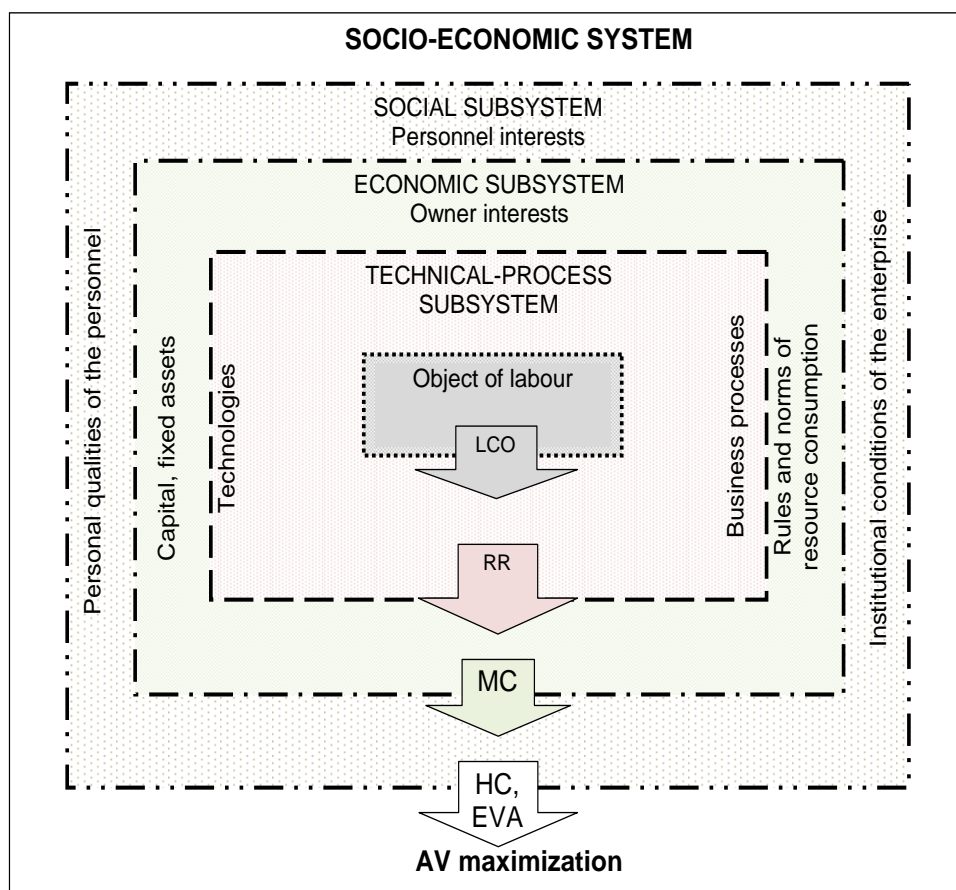
LCO–life cycle of the organization; RR – requirement for resources; MC – material costs; HC – human capital; EVA – economic value added; AV – added value.

Figure 1 The Enterprise as a socio-economic system

Social subsystem is represented by the primary subjects of the production organization which are the personnel and the owner of the enterprise. It is their interests that must be met and balanced. The basis of the social subsystem is the aggregate of the business qualities of personnel and institutional conditions of the enterprise which precondition the implementation and development of the staff skills. The business qualities shall be understood to mean the characteristics inherent to workers and professionally significant for performance of a labour function: qualification and interests. Institutional conditions are a complex of incentives, powers and other organizational tools provided by the enterprise for the realization of a person's business qualities. The result of functioning and development of the social subsystem is a growth of the human capital cost. Maximization of expenses for remuneration of labour and personnel development is a predominant interest of the staff in the process of the socio-economic development [18].

The experience of the developed countries indicates the necessity of allocating from 30 to 45% of added value to the social needs. In the structure of added value of enterprises in the developing countries these expenses are averagely no more than 20-25%. As a result, taking into account higher qualification and performance of the workers in the developed countries their living standards exceed the respective level of workers in the developing countries and emerging countries by 3-5 and more times.

Maximizing the economic value added (EVA – is a share of added value left after expenses for remuneration of labor and personnel development, payment of taxes and deductions, as well as payment of the costs of capital) is a predominant interest of the owner of the enterprise in the process of the socio-economic development since it reflects profitability of the company and serves as a basis of its cost. The amount of the gained economic value added is a source of investments that can be directed for the economic development of the enterprise. On the basis thereof the added value can be spent for remuneration of labour and personnel development, taxes to the budget and other compulsory deductions, interests and implementation of the investment programmes of the enterprise:

$$AV = EVA + W + T + WACC \times CE , \qquad (1)$$

where AV – added value; W – expenses for remuneration of labour and personnel development; T – taxes to the budget and other compulsory deductions; WACC – weighted average capital cost; CE – investment capital.

Each of the subjects of the enterprise is interested in maximizing its share upon distribution of the added value and in satisfaction of its interests. In this regard the target function of the socio-economic development is maximizing an increment of the added value for the period.

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$$\Delta AV(t) \rightarrow \max \quad (2)$$
.

The increment rate of the added value that should be higher than zero was proposed as a criterion of efficiency of the socio-economic development:

$$k_{AV} = \frac{AV_{(t)} - AV_{(t-1)}}{AV_{(t)}} \quad ; k_{AV} > 0 \qquad (3)$$
.

Distribution of the added value is a key tool of managing the socio-economic development. The optimal distribution of the added value predetermines the balance of interests between the subjects and hereby ensures a new stage of development.

The key moment in theoretical comprehension of the balance and concurrence of interests and actions of the subjects of the production organization is stating a concept of the interest in the context of the production-economic relations.

In the contemporary scientific literature there is no uniform understanding of the category of "interest." In our view the interests of the subjects consist in obtaining benefits allowing to satisfy the emerging needs on the one hand, and in fair subjectively distribution of these benefits on the other hand.

Generalizing the concept of "interest" with respect to the production-economic relations emerging in the process of the socio-economic development of the production organization the following logical formula is specified: certain labour activities of the subject take place under the influence of his/her needs representing the image of a desired benefit that will replace the needs (on condition that these activities are fulfilled). Since the image of a desired benefit reflects the interests of the subject a quantitative estimate of the desired benefits with a certain assumption can be equated with the qualitative estimate of the interests.

In production relations satisfaction of the current need is followed by the actualization of the demand of a higher level which requires greater benefit including intangible one and accordingly more efficient activities to gain the benefits. For these activities the development of the subject is required, and in order to obtain the result the development of the system within which these activities are fulfilled is required.

In case of unfair distribution of benefits or if the amount of the benefit does not coincide with the expectations of the subject, no satisfaction of the current need is achieved and the activities of the subject become less efficient. In its turn it results in degradation of both the subject and the system.

The interest as a manifestation of the individual's relation to one or another object of his/her need (motive) is characterized by the following features:

1)   Dynamism – the interests of the subject change over time. New interests arise when the current interests are satisfied or development goals change.
2)   hierarchy – the structure of the subject's interests has a hierarchy which is determined by the hierarchy of subjective goals at each stage of development;
3)   Inclusion – the interests of every following level of hierarchy arise when the interests of the previous level are satisfied.

The vector of the socio-economic development of the organization irrespective of conditions of the external environment shall be collinear with the vector of predominant interests of subjects among which the personnel of the organization and the owner of business should be distinguished in the first place (Figure 2).
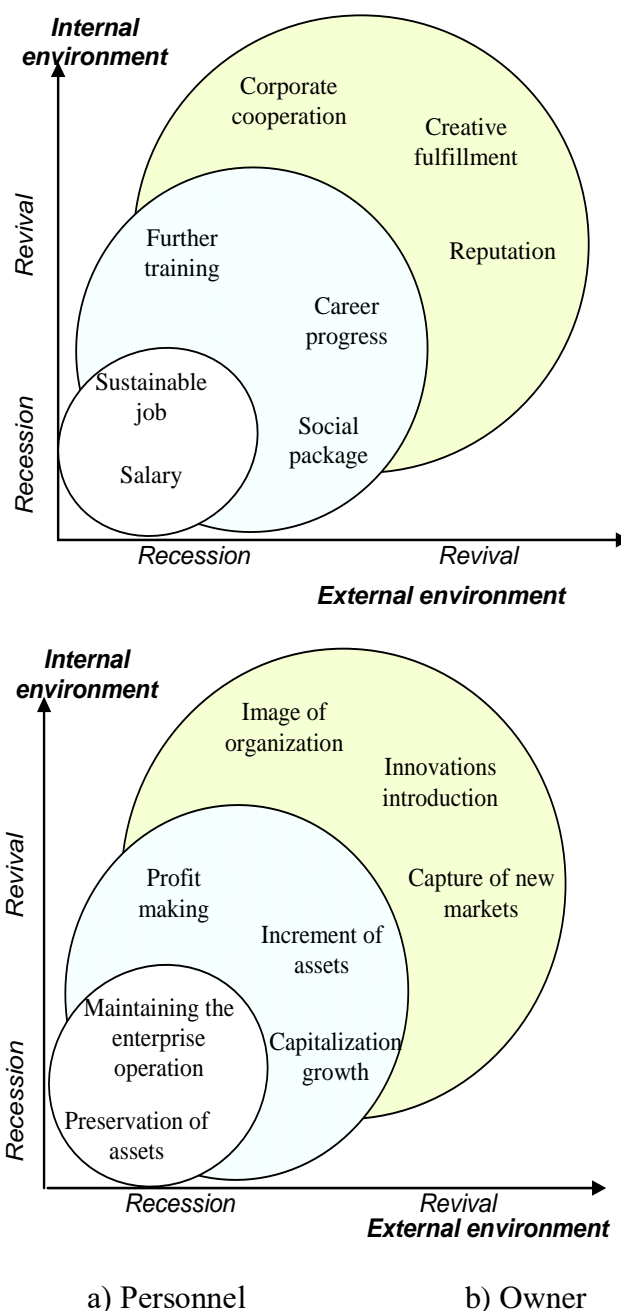
a) Personnel   b) Owner

Figure 2 Structure and dynamics of the interests of subjects in aproduction organization

Without the monitoring of changing interests and forming the relevant mechanism of the corporate concern in satisfaction thereof it is impossible to ensure the labour performance level that would enable to implement the interests of all subjects of the enterprise [19,20].

The model to achieve the balance of interests of the subjects of organization is based on the marginal utility theory and helps to distribute the added value be-

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tween the personnel of the organization and the owner of the business under limited resources in the best possible way [21, 22].

According to the proposed model the added value gained at the enterprise except for compulsory tax payments, deductions and charges stipulated by the legislation (T) shall be distributed for the purposes of economic or social development:

$$ED + SD = AV - T . \quad (4)$$

The obtained expression determines the restraint of the enterprise expenses for development where the function $ED = f(AV - T - SD)$ has the nature of the line AB (Figure 3). Let us call this curve a line of the current limited development. Since the level of costs cannot be negative the available multitude of options represents an area of OAB figureconstrained by the current development limitation line and coordinate axis. The point of selection of the optimum managerial decision with respect to distribution of the added value is on line AB. If the selection point is below the line AB the funds are spent irrationally and some amount of the added value of the enterprise remains undistributed. In case when the selection point is above the line AB the borrowed assets are required.

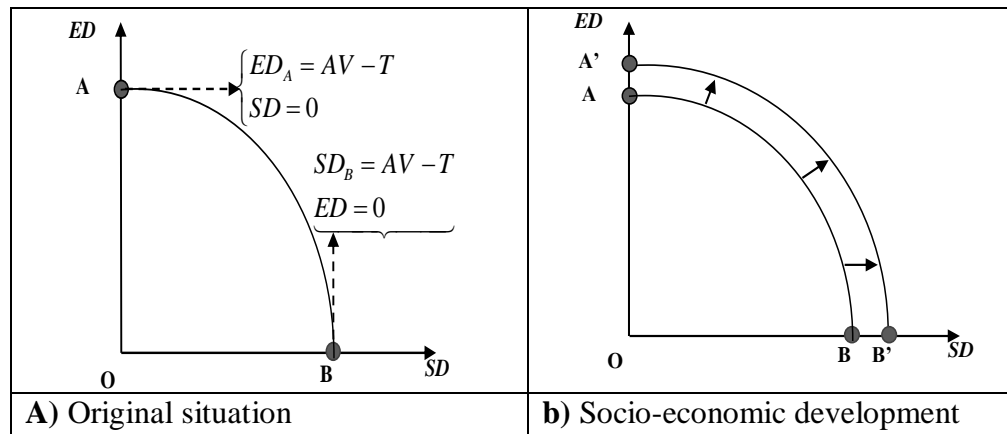| A) Original situation	b) Socio-economic development

Figure 3 Distribution of the organization's expenses for satisfying social and economic interests

As a result of the socio-economic development of the enterprise the added value grows and the OAB line is shifted parallely upward forming the A'B' line (Fig. 6).

The coordinates of point's A and B characterize the maximum level of the gained added value (AV) that can be directed to satisfy only the economic interests (ED) or only for social development (SD). In such a manner the interests can be satisfied in one of the directions only at the expense of cost reduction for the alternative direction.

When distributing the added value one should have in mind that according to the marginal utility theory and Gossen's laws:

– in consecutive spending of resources for the social or economic development the marginal utility for the socio-economic development of every following resource unit in any direction is lower than the previous one.
– the expenditures for the social and economic development are possible in various combinations one of which secures the maximum efficiency of the enterprise development.

– no matter how large is the volume of costs for one of the directions of the socio-economic development, still it cannot compensate for a complete lack of costs for the other direction. Moreover, in a medium-term and long-term periods the enterprise cannot fully refuse from satisfying the economic or social interests.

The permissible range of decisions with respect to distribution of the added value between social and economic interests is determined by the following constraint system:

$$
\begin{cases}
SD_{\min} \geq (AV - T) \times k_{SD}^{\min} \\
ED_{\min} \geq (AV - T) \times k_{ED}^{\min} \\
\quad k_{SD}^{\min}; k_{ED}^{\min} > 0
\end{cases} \tag{5}
$$

where $k_{co}^{\min}; k_{зo}^{\min}$ – coefficients reflecting the minimum level of expenses for social and economic interests.

The graphic image of the constraint system (**Error! Unknown switch argument.**) can be presented in form of feasible region (Fig. 4.a) forming the figures successively: OAB – for the added value 1; OCD – for the added value 2; OEF – for the added value 3. The decision region presented in Figure 4b shows the options for distribution of the value added ensuring sustainability and efficiency of the socio-economic development of the enterprise.

When building the area of the added value distribution it should be taken into account that the process of the socio-economic development of the production enterprise is implemented in micro-cycles consisting of the phase and economic development. Within the frameworks of each micro-cycle the changes in the economic and social subsystems take place by virtue of which the enterprise acquires new properties. For the efficient and sustainable socio-economic development several micro-cycles shall be implemented. As a result the path of the enterprise development according to the dialectic law of "negation of the negation" takes the form of the spiral (Fig. 4b).

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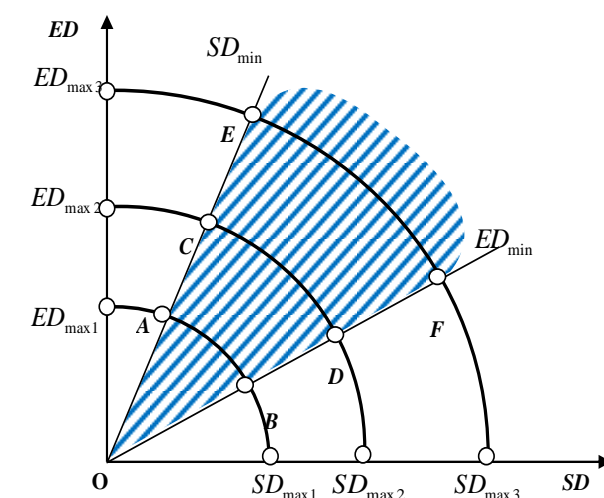
a) Tolerance region
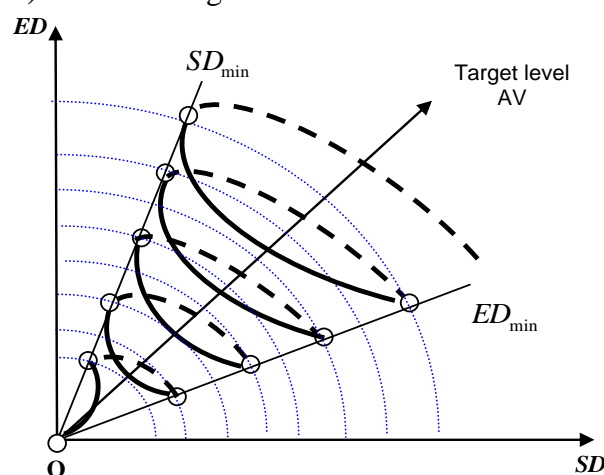
b) Cyclic process of development

Figure 4 Area of options for the socio-economic development

Decisions with respect to the added value distribution between the primary subjects of the organization, as well as the selection of the type of balance of interests shall be determined depending on the combination of cycle phases of the external and internal environment.

Cyclical nature is a universal regularity of the world around. For the external environment it is rational to identify four types of cycles that have the greatest influence on the organization: short-term cycles of J. Kitchin, medium-term cycles of C. Juglar; long-term cycles of S. Kuznets; overlong cycles of N.D. Kondratyev (K-cycles).
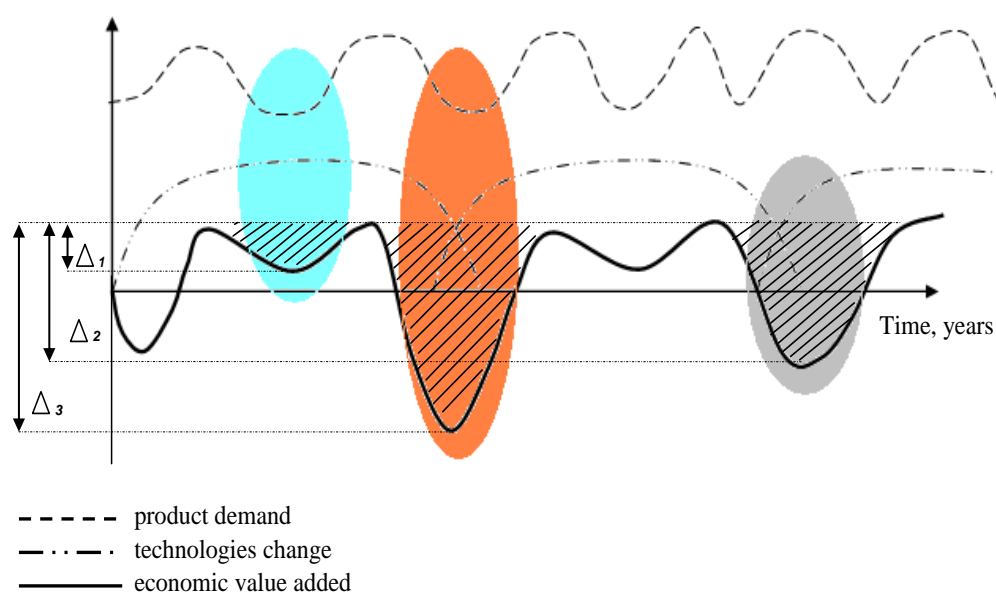
The cycles of the external environment coincide and strengthen each other. Thus the phase of Kondratyev wave (K-cycle) affects the gravity of the crisis in cycles of Juglar and Kuznets. Taking into account the beginning of the downward swing, the economy revivals in the near 15-20 years will be negli-

gible whereas crisis will be severe and protracted [23]. The present stage of economic development is in closing phase of the upward swing of the fifth K-cycle. The cycles of Juglar and Kuznets also pass into the recession stage.

Apart from the external cycles the rates and efficiency of the enterprise development are affected by the cyclical nature of the factors from the internal environment. For a production organization within the frameworks of this study the factors of cyclical nature that have a considerable impact on its socio-economic efficiency were determined: renovation of equipment, ageing of the personnel, technological re-equipment of the production processes.

The rational strategy for the organization development depends on coincidence of the cycle phases of external and internal environment at the moment and in future. Identification and forecast of the phase of external economic cycles is performed on the basis of studying the dynamics and tendencies of the development indicators with due account for the data concerning previous crisis. The cycle phases of the external environment are identified based on the officially published statistical data, forecasts and expert polls. The cycle phases of the internal environment are identified analytically based on the data of internal reporting at the enterprise.

On the basis of the obtained data the forecast of coincidence of the crisis phases and revival phases of the external and internal environment cycles is made. A considerable decrease in the EVA value occurs upon the coincidence of the crisis phases of external and internal environment. In this case usually the demand for the products essentially falls, inflation rates grow, and the number of personnel is reduced. Under such conditions the development rates considerably slow, the recession as well as a complete degradation of the system is possible.

In case when the crisis cycle phase of the external environment coincides in time with the revival cycle phase of the internal environment and the revival cycle phase of the external environment coincides with the crisis cycle phase of the internal environment the enterprise development rates also decrease but less significantly (Fig. 5).

- - - - -   product demand
— ·· — ·   technologies change
————   economic value added

(grey)	– the crisis preconditioned by the cyclical nature of the internal environment
(cyan)	– the crisis preconditioned by the cyclical nature of the external environment
(orange)	– the crisis preconditioned by the cyclical nature of the internal and external environment

Figure 5 Potential situations for crisis phenomena in the production organization

The cyclical changes in parameters of the external and internal environment can be described by the following equations:

$$f_i = A_i Cos(\omega_i x + \varphi_i),\qquad(6)$$

where A_i – oscillation amplitude, ω_i – cyclic frequency of oscillations, φ - oscillation phase. t – ordinal number of the period in a cycle under study; T – cycle duration.

Under conditions of instability of the external and internal environment the efficiency and sustainability of the organization's development is ensured by the pro-active management [24]. At that the control signal in a short-term period is developed on the basis of a feedback loop, and in a long-term period – on the basis of forecastingthe coincidence of cyclic phases of the external and internal environment. With regard to the development of the production organization this approach enables to forecast the values of key development parameters in each period of time and determine the confidence ranges for each of them.

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The forecasting shall be performed using passive and active approaches that should be combined in the management process. Both approaches are interconnected and complement each other.

The objective of the passive approach to forecasting consists in revealing the existing tendencies and extrapolating them to the future. The result of the passive forecasting enables to evaluate the degree of satisfaction with the levels of future parameters of the enterprise which represents the information for elaborating control activities aimed at improvement of the control object characteristics. An active approach to forecasting basically implies the purposeful formation of conditions for development. The management strategy shall bring the operating parameters of the enterprise to the state determined by the objective set (Fig. 6).
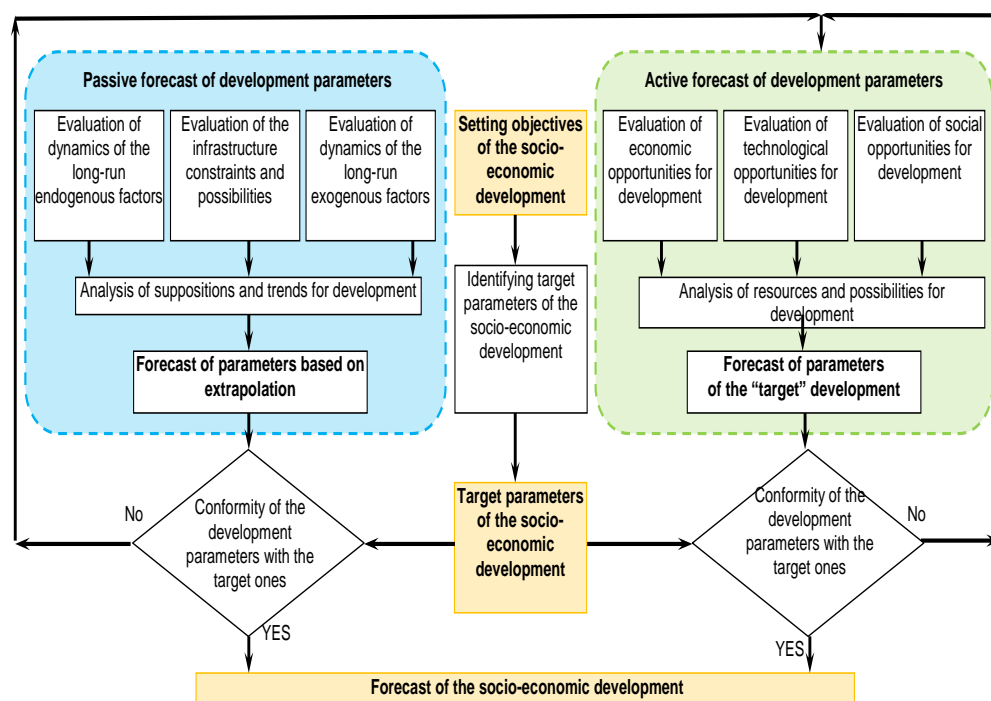

Figure 6 Logical succession of forecasting the socio-economic development of the organization

In order to solve the problems of the passive forecasting it is rational to use trend or economic-mathematical models as well as the method of historic series.

The active forecasting is performed using a complex of technological and economic-mathematical models. The proposed models are interconnected and integrated into the unified resultant model of forecasting the socio-economic development of the production organization (Fig. 7) [25].
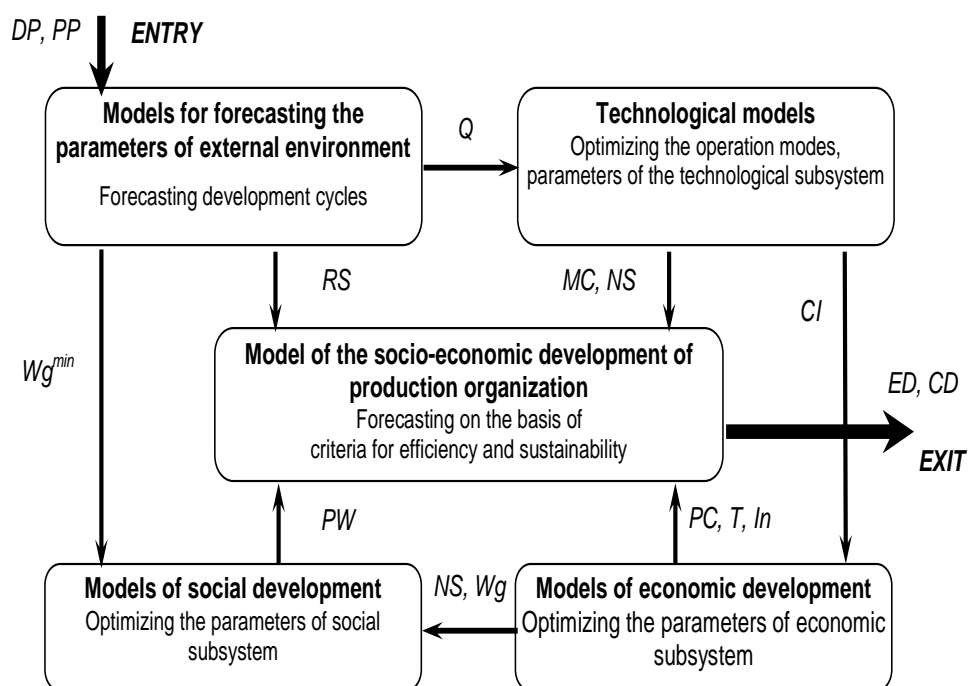
DP – demand for products and services; PP – price for products and services; Q – production capacity; RS – revenue from sales of products and services; MC – material costs; NS – number of staff; PW– productivity of workforce; CI – capital investment in renewal and development of key assets; PC – production costs; T – tax liabilities; Wg – wage level; In –investments; ED, SD - expenses for the economic and social development.

Figure 7 Complex of economic-mathematical models for managing the organization development.

While simulating the parameters of the production organization the increased level of uncertainty is taken into account. In this regard the models enable:
–   to take into account the cyclical nature of parameters of the external and internal environment on the basis of revealing the coincidences in time of cyclic phases of external and internal environment;
–   to determine the optimum values of the key development parameters in a short-term and long-term periods with due account for the balance of interests of all the parties concerned;
–   to take into account the uncertainty of the primary factors that influence the socio-economic development of the enterprise.
The result of simulation is the evaluation of possibilities to achieve the goals of the socio-economic development in the short term and long term. The target functions of the socio-economic development in the short term and long term are:

$$\begin{cases} EVA_t \to \max \\ \sum_{t=0}^{T} \dfrac{EVA_t}{(1+WACC)^t} - In \to \max \end{cases} \qquad (7)$$

where EVA – economic value added for the period t, rubles; WACC – weighted average capital cost, ea.; In – investments, rubles.

RESULTS
The conclusions made on the basis of logical constructions as well as the elaborated economic-mathematical models passed extensive practical evaluation test at a number of production organizations and companies of Russia and Kazakhstan. A number of the authors' suppositions is confirmed by the expert assessments and the results of the sociological surveys.

In order to determine the interests of the subjects of enterprise and their priority an opinion poll was carried out in several major Russian companies from the coal-mining industry: OAO Vorkutaugol, JSC SUEK-Kuzbass, OOO SUEK-Khakassia (around 250 specialists and 10 representatives of the owner were interviewed). The respondents were offered to state and evaluate according to a 9-point scale (with priority from 1 to 9) the most priority interests arousing in their production-economic relations (Fig. 8). Since the predominant interests are determined by the social position of the individual, the interests of the personnel and the owner of the enterprise do not coincide in the context of the production and economic relations though they have some common elements.

Point
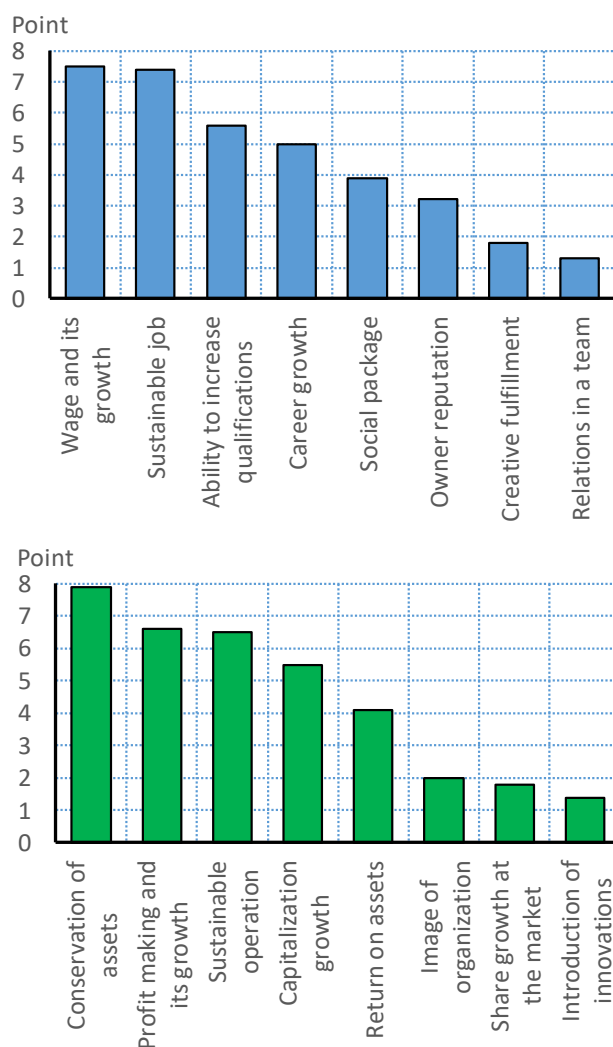
a) Personnel	b) Owner

Figure 8 The results of evaluating the priority interests of the subjects of the socio-economic system in the organization

The studies prove that the interests "material welfare" and "sustainable job" are of the highest priority (predominant) among the personnel (the average point is 7.4 and 7.3 respectively). The owner of the enterprise is highly interested in making a profit and preserving the assets of the enterprise (the average point is 6.5 and 7.9 respectively).

The interests of the subjects consist in obtaining objective benefits allowing to satisfy the emerging needs on the one hand, and in fair subjectively distribution of the available benefits in the organization on the other hand.

The interests of the owner and that of personnel are implemented primarily through funding of economic and social programmers by way of distributing

the obtained added value. The analysis of the development data of mining enterprises confirmed that the social and economic costs are distributed in a certain area, whereas the average value deviates from the median with a proportionality factor of 1.5-2.0 (Fig. 9).
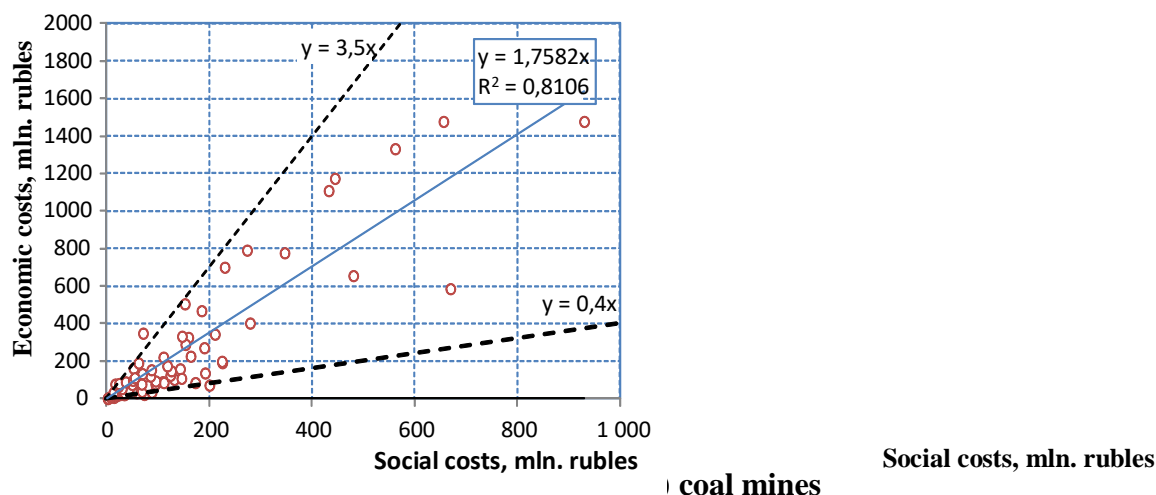

Figure 9 An area of satisfaction of the social and economic interests at mining enterprises

The spread of actual values of the indicators forms an area with options satisfying social and economic interests. For a production organization this area is determined by the range within the lines which make the relation of social and economic costs (Table 1).

Table1 The boundary of the area range of satisfaction of social and economic interests of the subjects at the mining enterprises of Russia**.**
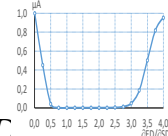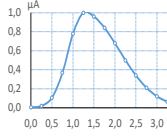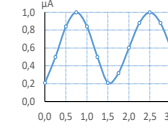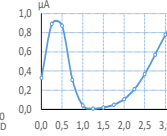
The range boundary	An area of satisfaction of social and economic interests at different types of mining operations	
	open-pit mining	underground operations
Lower	$ED = (0,4 \div 0,5)SD$	$ED = (0,4 \div 0,5)SD$
Upper	$ED = (3,0 \div 3,5)SD$	$ED = (2,0 - 2,5)SD$

The boundary of the area range of satisfaction of social and economic interests of the subjects of organization can be described by fuzzy logic. At the same time, the difference in coefficients in the function of belonging of production organizations to certain industries and types of activity can reach significant values. Thus with respect to the above statistical data even in one sector the upper bound of costs for the economic development is higher for the mine workers which can be explained by their higher social activity associated with the peculiarities of labour conditions.

Based on the empirical data presented in Fig. 8 and reflecting the processes of the socio-economic development characteristic of the mining sector the factors

of the added value growth were analyzed through the ratio of social and economic costs. As a result characteristic types of the balance of interests of the subjects of organizations were identified (Table 2).

Table 2 Types of balance of interests of subjects of the organization

Indicator	Description of the types of balance of interests			
	Destructive	Complementary	Compromise	Controversial
Dynamics of social costs (∂SD)	↓ [SDmin;0]	↑, ↑↑ [SDmin;+∞]	↑ [SDmin;+∞]	$SD_{min} \rightarrow$ const
Dynamics of economic costs (∂ED)	[EDmin;0]	↑, ↑↑ [EDmin;+∞]	↑↑ [EDmin;+∞]	↑ [ED_{min};+∞]
Function of belonging of μ_A relation $\partial ED/\partial SL$	$\{\begin{array}{l}[0;0,5]\\ [3,0;\rightarrow\infty]\end{array}$	[0.25;3.5]	$\{\begin{array}{l}[0;1,5]\\ [1,5;4,0]\end{array}$	$\{\begin{array}{l}[0;1,0]\\ [1,5;10,0]\end{array}$
Development sustainability	Unstable System degrades	Sustainable in the short term and in the long term	Sustainable in the short term	Unstable in the current period
Probability of changing the management strategy	High	Low	High in the long term	High in the short term

Destructive type – is characterized by un co linearity of the vectors of satisfaction of the subjects'interests and their imbalance. The result of the interests' imbalance is strikes, shutdown of the enterprise up to closure thereof.

Complementary type- This type of balance of interests is characterized by concurrence of implementation of the primary interests of subjects. Economic and social costs with the growth of efficiency and production volumes are increased proportionally in the ratio 1.0:1.5 respectively. With this type of balance of interests the highest indicators of efficiency and sustainability of the

socio-economic development in the short term and in the long term are ob-
served.
Compromise type- In this type of balance of interests the non-dominant inter-
ests of the subjects of organization are suppressed. The priority is generally
given to the economic development. In case of high production performance in
the current period the development sustainability is possible but the develop-
ment path shall be necessarily corrected in the strategic plan towards satisfy-
ing social interests.

Controversial type In this type of balance of interests either economic or social
interests of the subjects of organization are totally suppressed. The develop-
ment can prove efficient in the short term but will not be sustainable. In the
controversial type of balance of interests the economic costs are generally ac-
tively increased whereas social interests are either suppressed or supported
within the minimum ranges.

The specified attributes enable to diagnose the cooperation type and also fore-
cast the probability of achieving the development goals. Implementation of the
proposed methodological approach to evaluating and forecasting the balance
of interests of key subjects of the organization enables to distribute the added
value between the personnel and the owner under limited resources depending
on the selected path of the enterprise development, and also to reveal the ne-
cessity of eliminating contradictions in favour of the development interests to
develop an efficient cooperation.

Taking into account the cyclical nature allows the organizationselecting the
strategy for the socio-economic development and conduct in a specific situa-
tion. Depending on the cycle phases of the external and internal environment
the strategies for the socio-economic development were proposed (Fig. 10).

Cycle phase of internal environment/ attributes	Cycle phase of external environment/attributes	
	Recovery: Growth of demand and prices for products Availability of borrowed capital	**Recession:** Fall in demand and prices for products Borrowed capital cost increase
Recovery: Growth of labour and equipment productivity Capacity growth Production cost reduction	Innovative strategy	Adaptive strategy
Recession: Loss of labour and equipment productivity Capacity decrease Equipment deterioration, technologies obsolescence	Evolutionary strategy	Concentrating strategy

Figure 10 Strategies of the socio-economic development depending on the cycle phases of external and internal environment.

Concentrating strategy- stipulates concentration of all available resources on the most necessary directions for the purpose of preserving the "key elements." The "key elements" of the organization include personnel, key assets as well as the mastered technologies and business-processes. Preservation of the "key elements" shall be accompanied by liquidation of those "elements" that do not have any value for the enterprise and "balk the progress." When selecting the "key elements" the subject of management has an important objective to ensure the required number of the personnel with required qualification that would comply with the requirements of the enterprise strategy, as well as the required production assets and reserves capable of securing the achievement of the strategic goal of the enterprise development. The basis of this strategy is the concentration of intellectual and business qualities of the personnel capable of leading the organization out of recession.

The adaptive strategy- is implemented on the basis of adjusting the enterprise to new conditions of the external environment consisting in transformation of the links and relations of the cooperating subjects of the enterprise for the purpose of developing the qualities conforming to the external environment in which the enterprise operates. The basis of this strategy is the development of the intellectual and business potential of the personnel and organizational-technological communications.

Evolutionary strategy- In case when the crisis cycle phases of the internal environment coincide with the revival cycle phases of the external environment 2 options of this strategy are possible depending on the actual state of the

technical-process and social subsystems of the enterprise. In case when the internal crisis of the enterprise is associated with the necessity for renovation or technical re-equipment, the evolutionary strategy can be implemented due to the technical-process changes. If the crisis is associated with the low level of the personnel development the investments into the human capital and development of the social subsystem are required.

Innovative strategy- In case of coincidence of the revival cycle phases of the external and internal environment, that is in the period of favorable market situation the creation of the following reserves is required favorable for extraction and quality reserves; equipment capacity; capital in form of reserve funds; human capital possessing high qualification and skills sufficient to search for and introduce innovations.

The efficiency of implementation of the provided strategies for the socio-economic development of the organization is determined by an adequate balance of interests of the key subjects: personnel and the owner (Table 3).

Table 3 Distribution of the types of balance of interests for different strategies of the socio-economic development of the organization.

Development strategy	Type of balance of interests	Measures to achieve the balance of interests	Predominant interests	
			Owner	Personnel
Innovative strategy	Complementary	Satisfaction of the subjects' interests	Capture of new markets Introduction of innovations	Creative fulfillment Corporate co-operation
Evolutionary strategy	Complementary Compromise	Partial infringement of non-dominant interests. Satisfaction of predominant interests	Profit growth Increment of assets Entry into new markets	Career advancement Further training Salary growth
Adaptive strategy	Compromise Controversial	Infringement of non-dominant interests. Partial satisfaction of predominant interests	Preservation of assets Maintaining stable operation of the enterprise	Maintaining stable salary Career advancement
Concentrating strategy	Controversial	Partial infringement of	Mitigation of risks to	Preservation of job and mini-

Develop-ment strat-egy	Type of balance of interests	Measures to achieve the balance of in-terests	Predominant interests	
			Owner	Personnel
		predominant interests during a short period of time	lose assets	mum salary

As the practical experience of operation of production enterprises shows the sustainability and efficiency of their development can be secured only on the basis of regular introduction of innovations. It is associated with the objective growth of competition under conditions of accelerating scientific and technical progress. When the enterprise purposefully implements innovations the future crisis becomes controlled and the opportunity appears to counteract the crisis phenomena the successfulness of which depends a lot on the timely forecasting the crisis.

DISCUSSION
The carried out research enables to reveal and scientifically substantiate the es-sence of the socio-economic development of the organization which consists in preserving the path of improving the indicators of social and economic effi-ciency of the organization and satisfaction of the interests of its subjects in the short term and in the long term under changing conditions of the external and internal environment.

Based on the analysis of the concept of the socio-economic development the essence of social and economic interests of the subjects of organization has been clarified from the point of view of their dynamism, diagnostics and satis-faction. In the considered aspect the content of the concept "the efficiency of the socio-economic development" was studied from the point of view of satis-faction of the changing interests of subjects and achievement of their dynamic balance for the purpose of ensuring a sustainable development of the organiza-tion. The dynamic interests of the primary subjectsof the organization were systematized depending on the cycle phase of development of the external and internal environment. It was proved that the balanced satisfaction of social and economic interests of the subjects oforganization ensures sustainability of its socio-economic development.

For the purpose of quantitative and qualitative formalization of the evaluation of balance of interests of the key subjects of organization using simulation models a theoretical model of forecasting the interests was developed. The model is based on provisions of the marginal utility theory with respect to the subjects of the enterprise satisfying the dynamic social and economic interests in the process of the enterprise development. As a result of the simulation the ratio of costs for satisfying social and economic interests under various condi-tions of the external and internal environment were established on the basis of

which the types of the balance of interests were stated. It is reasonable to determine the specified ratio using the tools of fuzzy sets taking into account the strategy of the socio-economic development. The result of applying the developed model is a growing efficiency of managing the socio-economic development of the enterprise under conditions of changing external and internal environment.

The aggregate of the basic strategies for organization development based on application of the laws of cyclic nature of the external and internal environment development was determined. The selection of the development strategy ensuring the efficiency and sustainability is determined by the coincidence in time of the cycle phases of external and internal environment: 1) concentrating development – in case of coincidence of the crisis cycle phases of the external and internal environment a concentration of all available resources of the enterprise and conservation of its "key elements" is required; 2) adaptive development – in case of coincidence of the crisis cycle phases of the external environment with the revival cycle phases of the internal environment an adaptation of the enterprise to new conditions of external environment is required which consists in transformation of links and relations between the subjects of the enterprise; 3) evolutionary development – in case of coincidence of the crisis cycle phases of the internal environment with the revival cyclephases of the external environment two scenarios are possible: crisis recovery can be implemented through organizational transformations at the enterprise, or, which is more complex, through technical-process changes; 4) innovative development: in case of coincidence of the revival cycle phases of the external and internal environment, that is in the period of favorable market situation the creation of the rational structure of reserves and development intensification through innovations implementation is required.

A complex of simulating, heuristic and economic-mathematical models was developed which allows to implement the mechanism of managing the socio-economic development of the organization based on correction of parameters of the socio-economic development in accordance with the changing interests of its subjects, the state of the external and internal environment with due account for the existing constraints. The complex of models includes: a model for forecasting the parameters of external environment; models for optimizing the parameters of the technological, economic, and social subsystems; a model for forecasting the parameters of the socio-economic development of the organization. Testing the developed complex of models at evaluation of organizations' activity enabled to reveal the features of their development; create a management mechanism ensuring the dynamic sustainability of the socio-economic development of the organization.

As the most substantial directions for further study of the social and economic dimensions of management of the organization making products and services the following is considered:

–   ensuring the dynamic sustainability of development as retention of the socio-economic parameters in the area of the path of rational parameters;

–   structural interconnections of the social and economic dimensions of management and their impact on the parameters of the development sustainability in the long term;

–   Structural dynamics of the parameters of socio-economic development depending on the cycle phases of the external and internal environment, development cycles, and also dynamics of the priority values of society.

CONCLUSION

In the course of the study it was established that without changing the management paradigm and transition of the organization to the socio-economic development it is impossible to achieve the innovative economy and ensure sustainable functioning and competitiveness in the long term both at macro- and micro-level. Resolving the problem of transition to the efficient and sustainable socio-economic development of organizations requires changing the scientific and methodological approaches and criteria, improving the methodology and using new progressive management methods.

The proposed concept of managing socio-economic development of the production organization is based on the methods of regulating the process of formation and distribution of the added value which ensures satisfaction of interests of the enterprise owner and personnel, and achievement of the required development rates.

It was proved that sustainability of the socio-economic development is characterized by the path of improving the enterprise performance indicators in the short term as well as by conservation of possibility for the development of future generations in the long term. A relevant factor ensuring efficiency of the socio-economic development of the organization in the short term and long term periods is the balance of interests of its subjects. In order to manage the balance of interests a theoretical model has been proposed which is based on provisions of the marginal utility theory and enables to forecast the types of the balance of interests depending on the ratio of costs for satisfaction of the social and economic interests. As a result of the simulation four types of the balance of interests were distinguished: complementary, compromise, controversial and destructive. It was established that the maximum efficiency of the socio-economic development is achieved at the complementary type of balance of interests where the ratio of costs for the economic and social interests is within the range [1.0;1.5]. In case of the interests imbalance (destructive type of balance of interests) strikes take place, and shutdown of the enterprise up to closure thereof is possible.

Selection of the type of balance of interests is determined by the state of external and internal environment at the enterprise. A matrix for identification of the target type of balance of interests depending on the coincidence in time of cycle phases of external and internal environment was developed. When the crisis cycle phases of the external and internal environment coincide the goal is to conserve the enterprise. In this regard let us assume a controversial type of balance of interests built on domination of the economic interests of the

owner of the enterprise. In case of coincidence of the crisis cycle phases with the revival cycle phases of the external and internal environment, a compromise type of balance of interests is rational which allows implementing the required transformations contributing to adaptation of the enterprise to the external environment at the expense of satisfaction of predominant interests of subjects. In case of coincidence of the revival cycle phases of the external and internal environment, that is in the period of favorable market situation the complementary type of balance of interests is required under which a maximum growth of the labor productivity and achievement of the required level of the enterprise development is possible.

The applied use of the methodology for managing the socio-economic development of the organization is implemented in the context of elaborating the development strategy with the help of the algorithm which uses the model for analysis of the development of external and internal environment, the authors methodology of formation of the target type of the balance of interests, and methods for evaluation of efficiency and sustainability of the selected path of development. Using the proposed algorithm when elaborating strategies for the development of the lead organizations enabled to determine the possibilities of transition to the efficient and sustainable socio-economic development in the medium term and in the long term.

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