

Modeling the Labor Process One of the Tasks of Strengthening of Positive Trends in the Economic Growth of the Industrial Enterprises of the Region

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Abstract: The authors prove models of stimulation of labor process and study its properties. The list of concrete models of simple hierarchical systems is provided. Expediency of application in practice of results of research of theoretical models of labor processes locates.

Key words: Model • Modeling workflows • Promotion • Compensation • Matrix control mechanism

INTRODUCTION

The basic model of modeling of workflows in current conditions at the industrial enterprises of the Altai territory and the complex of models of stimulation of performers of labor processes developed on this basis can be used for real strengthening of positive growth trends in manufacturing systems.

Economic growth-it's not a smooth, evenly commits rise. In a move of social production there are years when the growth of the total production is very fast, in other years-slowly and sometimes decline. Recurring over a period of time variations in the movement of social production determine the "cyclical" nature of its development. The range includes single-cycle movement of the economy from one crisis to another, or considering another, from one point of take-off -"boom"-to another.

Name the only reason cyclic course of movement of the market economy is difficult. Therefore, many modern economists limited general indication of the fact that the cause of cyclic movement lies in the complex and contradictory nature of the multiple forces and factors that have had an impact on the movement of the market economy.

A Management of a Manpower at the Promyshelnyy Enterprise in a Phase of Economic Growth:

Special contribution to the development of the theory of economic cycles and phases introduced ND Kondratiev, whose name is now called the large cycles or "long wave". Examining the dynamics of the development of many countries in Europe for 100-150 years for a variety of interconnected indicators, he has come to the following important conclusions.

The development of the market system is in waves, production develops in the large cycles. Each cycle consists of two major phases: the rise and decay phase.

Phase is characterized by the rise of investment activity, enhanced investment capital to increase the volume of production, which is accompanied by an increase in employment and the increase in borrowing.

The decline phase is characterized by the appearance of excess capital who cannot find themselves applying for new investment, as already operating and capital without creating an excess supply of goods, as a result of the industrial production is reduced, which results in an increase in unemployment [1].

For industrial enterprises that are in the phase of economic growth is an important aspect of human resource management. For effective management of the

enterprise and enhance the positive trends of growth of industrial enterprises in the region need to address the modeling of work processes. This contributes to the development of game-theoretic model of corrective optimization and to consider ways to specify and use it in practice. The result is a new basic model of a hierarchical system that is recorded on the basis of correcting the problem of optimization.

Realization of this methodological approach is carried out using a mathematical model of management: models corrective optimization. The problem of synthesis mechanisms of personnel management of large industrial enterprises is to provide the highest possible increase in the efficiency of the production system (industrial enterprises). The complexity of this problem is that the center partially informed of the conditions of the lower level.

The main function of the center is to choose the initial decision and in finding the solution of the game the level of remuneration of the performer. Executive functions are reduced to the choice of the level of correction solutions in accordance with the designated compensation and to search the adjusted plan. The implementation process of correcting the solutions center and artist are working together [2].

Conditions of applicability of the model to optimize the correction for research purposes and for applications are adequate to the real decision-making processes, if the parameter vector, the unknown center of the first phase is constant throughout the planning period. For production systems, it can be:

- The price of raw materials and finished products;
- The parameters of the process;
- Levels of the actual costs of labor and materials in the production of intermediate and end products;
- The possibility of development of innovative and new forms of organization of the work..

For industrial companies using the model description can perform the following tasks:

- To regulate the rational awareness of central government and assess the loss of optimal control under conditions of incomplete and asymmetric awareness of decision-making centers;
- Develop a system of payment and incentives consistent with the objectives of the system as a whole and market conditions to attract workers.

We do not make a fundamentally new results in the description of the process of decision-making in a hierarchical system. We are talking about the detail of its models, involving well-known tenets of the theory of active systems [3, 4] and the hierarchical theory of games [5]. Used as general principles of personnel management in economic systems.

Complex of Concrete Models of Stimulation of the Personnel: At present, the scientific basis of hierarchical control systems are only being formed, so it is difficult to recommend a specific structure in all cases, even when controlling purely executive behavior.

Problems of control synthesis for developing simple hierarchical systems limited the development of specific models of incentive options. One of the basic types of hierarchical systems is one in which the development is due to a change of staff. This model can be used to check the adequacy of the incentive models, since the literature contains detailed results of the study of development of production processes.

It may also be tasked to develop methods for the identification of model parameters and numerical schemes for finding optimal strategies for the center to conduct effective on-line.

Thus, the research and development of a set of specific models of incentives for staff in the one-step hierarchical systems that have analogues in the economy of labor processes. The basic models are recorded based on the model of corrective optimization. The purpose of the study - rationale incentive models and characterization workflows.

In Our Studies Are Accepted:

- Firstly, different weighting factors;
- Secondly, the behavior model is recommended only for the description of typical performers and as a means to analyze the stability of incentive mechanisms to occur;
- Thirdly, the simulation is based on the principle of "mirror system".

It is formulated as follows. The "value" of wages and the "burden" of labor-subjective to the individual and groups of individuals reflect reality. The staff is eager to maximize their payment and is estimated to minimize the expected labor costs. Following the principle of reflective systems, the models do not need to use objective monetary wages and labor costs and reproduced human

Table 1: Matrix of modeling of labor processes

no	Model name	Interpretation	Adequacy	Identification parameter	Strategies			Generalizations	Concrete forms
					1	2	etc.		
1	execution of instructions	+	-	-	+	+	+	-	+
2	control of messages	+	-	-	+	+	-	+	-
3	economy of resources	+	-	+	+	+	+	+	-
4	economy of resources for a collective form of labor organization	+	-	-	+	-	-	+	+
5	optimization of the size of collective	+	+	+	-	-	+	-	+
6	norms (basic option)	+	+	+	-	-	+	-	-
7	pseudonorms	+	-	+	+	-	+	-	-
8	development of the equipment	+	+	+	+	-	-	+	+
9	revision of pseudonorms at the initiative of the center	+	-	+	+	-	-	-	-
10	revision of pseudonorms at the initiative of the performer	+	+	+	-	+	-	-	-
11	revision of norms from the actual developments	+	-	+	+	+	-	-	-

values, which may differ from those generally accepted. Under the principle of "mirror system " can explain many paradoxes in the economic behavior of people.

For payment models and incentives should be offered rates, the values of which to evaluate performance models, their associated economic and social recommendations. The practical application of the research results of theoretical models of work processes solve the problem of parameter identification, assessment of the adequacy and efficiency of simple payment models and incentives, in which it is possible to use the results of the valuation of labor. A list of specific models of simple hierarchical system shown in Table 1.

Thus, after considering the problem of mathematical modeling of processes and labor relations in the "employer-employee ", we note that here the employer is characterized by the following features are not considered in other approaches [6]:

- Firstly, it cannot (or will not) describe the production and management processes of the lower levels;
- Second, the employer must provide controllability B threads (optimal functioning of the production system as a whole).

CONCLUSIONS

The main scientific results of the research are as follows:

- A new method for modeling of active elements in production systems, including the formulation of the problems in hierarchical control systems active

in neindetifitsiruemosti reactions of the lower levels (workers), the development of generic and private models of human resource management systems and production type in the numerical solution of the corresponding mathematical problems.

A Set of Specific Mathematical Models Promote Artists Work Processes: These results can be used for the actual design and modeling studies of mechanisms for control in production systems for large industrial plants [7-10].

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