2. Kurtsev, I. V. Steady development of the agro business in Siberia: prerequisite, factors, ways / I. V. Kurtsev. Novosibirsk, 2005. 374 p. 3. Minasov, M. Strategy of steady development of agro industrial complex / M. Minasov // APK: the economy, management. 2004. № 9. P. 3–11.

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## **EVALUATION METHODS OF THE EFFECTIVENESS OF HUMAN CAPITAL USE IN THE ORGANIZATION**

The use efficiency of organizational human capital is considered as a background of organizational added value implementation. The most known methods of the use effectiveness of human capital are discussed and analyzed.

Keywords: human capital, intellectual workers, use efficiency, evaluation methods.

Functioning of the modern organizations takes place in the conditions of global financial and economic crisis and is characterized, as a rule, by negative results. However, the modern business environment represents not only the crisis moment, but also a real possibility for organizations to reach the next stage of development. For this purpose, it is necessary to concider the financial crisis as a chance to reconstruct the control system and to create the effective mechanism, capable to make complicated administrative decisions in any conditions. A basis of the organization development is the company personnel, or the human capital. Investments into the human capital, capable to develop new technologies, methods of work and to transform them into an attractive commercial product, are admitted by leading world corporations and scientists to be the most favorable ones to increase the enterprise competitiveness. The market success more and more depend on business orientation for the client, the unique commercial offer, but in particular on the efficiency of the organization personnel use that demands adequate methods of human capital evaluation that is poor studied. The present article is dedicated to the problem consideration.

Nowadays the human capital is understood as a body of knowledge, practical skills and creative abilities of the company employees, directed to perform current tasks. The other components are moral values of the company, workmanship and general approach to business. Today the human capital value is defined by the fact that technical, technological and financial possibilities of the enterprises and the countries cannot be a competitive advantage any more. There are not any serious restrictions in purchasing the technologies or capital formation. The main restriction of any business now is a human resource; therefore, it requires constant development, control and creating conditions for effective use. The role of the human factor increases because of the increasing share of branches and scope of action based on a high skilled labor: the fast-growing high technology sector of the industry, the service sphere, which share growth became an appreciable branch shift in the modern economy, including the domestic one. Besides, the increase of interest to the human capital is connected with the transition of many countries to the new type of economy – the economy based on knowledge.

In the conditions of economy of knowledge, traditional management methods do not always show the efficiency. There is a necessity to consider the new manufacture factor – the intellectual capital embodied in the organization personnel or in intellectual employees. The value of intellectual employees in a modern organization is defined by:

- they are a considerable share of the personnel;

- they create competitiveness of the organization;

- they are a key source of development.

Inapplicability of traditional management methods and the necessity of their updating is connected with the intellectual employee's characteristics:

 handling the information and knowledge in work and the ability of their processing into finished products, new knowledge;

 independence of professional activity from the means and conditions of production;

- personal identification more with the profession than with the particular organization or workplace;

- poor working control because of selling the results of the intellectual activity to the employer whereas the achievement process is hidden;

- in many aspects differs by uncertainty and simultaneously supposes various variants of problem solving;

- considerable social mobility;

- high ability for self-organization, therefore their autonomy and independence do not cause damage to the company, on the contrary, the increase in the share of such employees in the organization reduces for the need in managers;

- priority of intellectual development, instead of maximization of personal wealth etc.

The category of intellectual employees usually includes programmers, lawyers, designers, advisers, experts, analysts, experts in marketing and representatives of other professions capable to create a finished product without any physical means of production and the enterprise. The importance of this employee category for the organization and their characteristics initiate the search for new administrative influences on intellectual employees, including the definition of evaluation methods of the intellectual employees' use efficiency, as of the basic part of the modern organization personnel.

The resources limitation, basic for necessary performance of effective processes, is a challenge for those spheres of the economy which enterprises found their activity on the use of human resources, in the first place, the high technology branches, because in this area the use of more qualitative and, accordingly, more limited resources is required. All abovementioned concerns, first, the expenses of human labor and the finance as maintenance of such activity demands qualified employees and big capital expenses. Hence, it is necessary to evaluate all assets of the organization needed for the corporate purpose achievement.

Before analyzing methods of efficiency evaluation, it is necessary to specify the concept of "efficiency" in the authors' interpretation. Efficiency is a relative effect, the process potency, defined as the relation of effect; result to costs, expenses providing its obtaining.

Now there are a lot of approaches and methods for evaluation of personnel management efficiency. Let us consider the main ones and analyze them from the point of view of applicability to intellectual employees.

The basic methods of intellectual work evaluation, used in practice, may be divided into three groups: quantitative, qualitative (or descriptive) and combined (or intermediate) ones.

Quantitative methods of evaluation include mark, coefficient, methods, the method of rank order, the method of pair comparisons, the system of graphic profile, the method of «experiment», etc. Qualitative (descriptive) methods include the system of oral and written characteristics, the standard method, matrix and biographic methods, the method of a group discussion. The examples of the combined methods are the method of stimulating evaluations, groupings of employees, testing. The following methods are the versions of combined ones, combining quantitative and qualitative evaluations.

The evaluation of "360 degrees". The evaluation of "360 degrees" is data acquisition about the person's actions in real working situations and about shown professional qualities. The information thus, is received from the people communicating with this person at different levels: the chief, colleagues, accessory manufacturer, and clients. Getting information from the people co-operating with the evaluated

employee at his workplace makes the evaluation "360 degrees" a reliable enough tool. The applicant for the post can be enlisted as the expert: he is asked to evaluate his professional qualities to use these data further to correct his self-appraisal and create the plan of his individual development in common.

Many west oriented companies use a five-point scale for evaluation of business qualities of the personnel with the following description:

5 - skill level, allowing to show this quality in super difficult conditions, to develop its standards and to train others;

4 – level of expanded experience, allowing to show this quality not only in standard, but also in difficult conditions;

3- level of basic experience, allowing to show this quality in the majority of working situations;

2 - level of development when this business quality is shown far not always, but the employee already understands the importance of its manifestation and tries to develop it;

1 – this quality is not shown.

**Evaluation method according to decisive situation.** To use this method the experts on evaluation prepare a list of descriptions of employees' "correct" and "wrong" behavior in typical situations – "decisive situations". These descriptions are divided into subdivisions according to kind of work. Further, the expert prepares a registry for every evaluated employee where he/she records behavior examples for every subdivision. Later this registry is used for evaluation of the employee's professional qualities. Usually this method is used in evaluations, which are made by the chief, not the colleagues and subordinates.

**Method of rating behavioral instructions.** It is based on using "decisive situations" from which the required professional and personal qualities that become criteria of the evaluation are deduced. The estimator reads the description of some evaluation in the rating questionnaire criterion (for example, engineering competence) and puts a mark in a scale according to the evaluated employee's qualification. The method is expensive and labor consuming, but accessible and clear for employees.

**Method of supervision over behavior scale.** It is similar to the previous one, but instead of the employee's behavior definition in a current decisive situation the estimator fixes on a scale the quantity of cases when the employee's behavior has been unusual earlier. The method is labor consuming and requires essential material costs.

Method of questionnaires and comparative questionnaires. It includes a set of questions or descriptions of the employee's behavior. The estimator puts a mark opposite to the description of that trait which, in his opinion, is inherent to the employee, otherwise leaves a blank space. The sum of marks gives the general rating of this employee's questionnaire. Leaders, colleagues and subordinates use it for evaluation.

**Interview.** This technique is borrowed by HR departments from sociology and can include those methods of evaluation, which are up-to-date in the organization at the moment.

**Self-appraisal.** Self-appraisal is a process by means of which people "measure" their own efficiency, skills, abilities and other qualities. Companies use the self-appraisal method

as a part of techniques for overall performance, the evaluation-360 and even in the course of selection. Approximately 5 % of the American companies use some kinds of self-appraisal as a part of evaluation process of overall performance of their employees. For example, some law enforcement bodies use the self-appraisal method as a part of evaluation process of their employees as very often they work alone and nobodycan evaluate their work by some criteria. In other companies the self-appraisal method is used to gather initial information for the chief who is going to evaluate overall performance of employees. Other companies compare and discuss the results of the employees' self-appraisal and evaluation of the same employees by the chiefs.

As a whole, among all the variety of methods of personnel use evaluation quantitative methods of intellectual labor evaluation are mostly widespread, especially the mark, coefficient and mark – coefficient methods. Their advantages are objectivity, independence from the experts' personal relation to the employee, possibilities of result formalization, parameter comparison, result ordering and use of mathematical methods [1].

The efficiency of personnel management is defined, proceeding from volume, completeness, quality and timeliness of performing the functions assigned to employees. Corresponding criteria and indicators are necessary to define the level of personnel management efficiency. Choosing evaluation criteria it is necessary to consider, first, what problem solving evaluation results are used for and, second, what employee category the criteria are established for, taking into consideration that they will be differentiated depending on complexity, responsibility and character of the activity Performance of established standards or service standards with appropriate quality of work and decreasing the costs arising because of increased staff turnover, unreasonable idle times, etc can be used as criteria in the field of personnel management efficiency.

Thus, the personnel management efficiency evaluation consists of two components: the economic efficiency characterizing achievement of the company purposes using the personnel based on the principle of economic expenditure of available resources, and the social efficiency characterizing the degree of need expectation and interests of the wage laborer.

Some economists suggest considering the following as the components of economic efficiency of personnel management:

 parity of work results and the personnel costs, considered from the point of view of the set organizational purposes;

- the components reflecting the contribution of the personnel into long-term development of the organization. They include stability that affects continuity of staff, reliability of employees' work, absence of intensity and conflicts; flexibility that means the personnel's ability to adapt for new conditions, to promote organizational changes and to be ready to conflicts if it is necessary for implementation of innovative concepts.

Overall, success of the organization activity assumes the most effective usage of all available resources, first of all, human assets. However, the ways of effective usage of human assets differs radically from other resources usage as in this case it is provided with people's motivation or influence on their purpose. Specificity of intellectual employees' motivation is that their purposes and interests include both economic and creative components. The motivation of the intellectual employee depends on his/her efficiency, i. e. on his/her ability to reach the target. If his/her work loses efficiency, very soon the desire to work and to be of benefit disappears [2]. So, increasing efficiency of human capital use should become a priority direction of the modern organization management.

Complexities of the human capital efficiency evaluation are connected with its differences from the physical capital. Therefore, the manual worker shoul provide effectiveness, productivity, i. e. he should be capable to carry out the tasks correctly, but their adequacy does not refer to him. The manual worker's activity can be evaluated according to the quantity and the quality of the product. The brain worker does not produce physically felt finished articles that can be easily accounted according to their quantity and quality. The brain worker's product is knowledge, ideas and its practical implementation is possible when someone will use it to achieve particular results. In other words, the employee engaged into some intellectual activity, should give efficiency to his/her work (and not only his/hers, but also his/her colleagues' work results). In turn, the efficiency of the intellectual employee embodying the human capital of the organization is expressed in his ability to solve its actual problems, and the way of increasing the organization success is increasing of such employees' efficiency.

The changes also concern such a traditional indicator of personnel use efficiency, as labor productivity. Therefore, productivity of the intellectual employee is defined by the following factors:

1. Productivity requires the answer to the question: "What is the production target?" – as specificity of intellectual work means definitely the end result, for example, the design project, and the problem to achieve this result is usually assigned to the employee. In other words, he has to set the production target to himself.

2. The employee bears full responsibility. Intellectual employees should manage themselves and they need independence to perform their duty.

3. Continuous innovative activity should become an integral part of mental work and be included into a brainworker's production target; he/she should be responsible for introduction of innovations as changes and improvements are an attribute of creative activity.

4. On the one hand the brainworker should study constantly, and on the other – to learn constantly. The reason of the first activity is the motivation of self-improvement and development, and of the second one – the excess of the intellectual employee's knowledge level in the organization and the necessity to pass on a part of his knowledge to his/ her colleagues for productive functioning of the department and the organization as a whole.

5. The brainworker's productivity is not defined by quantity or volume. At any rate, it is not the main criterion. The basic measure of productivity of the intellectual employee is the quality of the set task solving [3].

Thus, the abovementioned evaluation methods of efficiency of human capital use of the modern organization, namely, of intellectual employees as its basic part, their special features and the complexities caused by these features, testify to the necessity of further research of this problem to update the evaluation methods and to maintain more successful functioning of the organizations at the expense of effective use of their human capital.

## Bibliography

1. Rak, N. G. Technology of integrated management personnel evaluation / N. G. Rak // Upravleniye personalom. 1997. № 10. (in Russian)

2. Drucker, P. Efficient manager / P. Drucker. M. : Wiliams, 2007. (in Russian)

3. Drucker, P. Tasks for management in XXI / P. Drucker. M. : Wiliams, 2007. (in Russian)

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## COST ESTIMATION INFORMATION SYSTEM OF APARTMENTS AT SECONDARY HOUSING MARKET AS A MANAGEMENT INVESTMENT TOOL

The aspects of objects' investments appeal are studied. The basic estimation methods of the real estate market are analyzed. A method of information system construction objects' cost estimation of investment is proposed.

Keywords: investments, information systems, modeling, estimation of real estate cost.

The main goal of the research is to study the database management for selling one-bedroom apartments in Krasnoyarsk, to estimate the objects' cost in real estate market, and to create competent investment capital.

The most consistent definition for investment is a longterm placement for the investor's future welfare. The main purpose of investing is seen as an attempt to achieve a final result (welfare), expressed in monetary terms.

In other words, the degree of investment efficiency is determined by the comparison of resource flows expressed in the form of cash and results of its use.

This process of comparison in general economic practice is called investment analysis or the analysis of investment effectiveness.

The process of analyzing investments is typically devoted to the following objectives:

- identification of economic investment feasibility, i.e. the identification of the absolute excess of the nested resource results;

- identification of the most effecient alternative investments;

- identification the most efficient portfolio.

In the majority of cases, to analyze the investment means to justify the investment decision, to be taken by the investor.

The advantages of real estate investing. According to the information provided by VCIOM, most inhabitants of Russia (51 %) deem to think that the best investments are in real estate purchase. This leaves behind the acquisitioning of gold and jewels – 19 % and money deposits in SberBank (17 %). Even during the financial crisis, the Russian real estate market was least exposed to devaluation. Investment in real property is always investment in real assets. The term "investment (placements) in real estate" is often understood as the acquisition of finished residential or nonresidential facilities that are bought for the resale purposes. This definition does not include real estate, bought for immediate use by the buyer, for example, for housing or business (with the exception of rent).

In addition the acquisition of unfinished projects isn't an investment in real estate, in this case it's investment in construction. Advantages of investment in real estate for clarity will be given in comparison with bank deposits and securities, such as shares in companies, mutual funds, etc.

The main and indisputable advantage of investment in real estate is its reliability. A bank may be ruined; a company's purchased shares can fail. Real estate risks are significantly less. It is impossible to lose, it can not be stolen, defaults and other economic shocks can only slightly change its price, which is usually temporarily. It is subject to risks, caused by natural disasters; is also at risk by recent judicial proceedings, involving environmental legislation violations (in greater extent this applies to houses).

Another fact, which makes investment in real estate attractive as a possibility of savings, is an extremely rapid increase in its value or, as experts say – rapid capitalization. What was bought last year, today costs half, and sometimes twice as expensive, depending on the location. The analysis of the price of a housing square meter in major cities shows that the capitalization of urban apartments has an average of 65 % per year increase. Not all successful companies can boast about such income increase. It is also important not to forget that real estate may bring an additional stable income, for example, if it is being leased. Resource increase in rental rates is