

Assessment of personnel risks at adoption of administrative decisions

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Abstract. In article the technique of an assessment of personnel risks is developed at a choice of optimum version of the administrative decision. The analysis of alternatives in the course of decision-making assumes serial consideration of all candidates solution with determination of advantages and shortcomings of each option by all possible criteria, including on a factor of personnel risks. Following the results of an assessment the card of risks is formed, and the assessment of an acceptability of alternative is defined as average weighed by each stage of realization of alternative where as weight information evaluation test is accepted.

Key words: personnel risks, alternatives of the decision, risks map, rating scale.

INTRODUCTION

Effectiveness of functioning of the economic organization in the conditions of the composite, dynamic and uncertain environment in many respects depends on comprehension of the reasons and mechanisms of action of personnel risks and their account at a decision making. Quality of human resource management of the organization defines effectiveness of activity of the organization and success of achievement of the purpose.

At the same moment, in practice of functioning of the Ukrainian organizations not only methods of identification of personnel risks are not developed, but often there is no comprehension of need of their account in organization activity. Also in science this problem yet did not receive complete conceptual judgment and the methodical decision that considerably slows down development of the theory and practice of management by personnel risks.

The purpose of article is development of a technique of estimation of personnel risks at an alternative choice at adoption of administrative decisions.

Many leading domestic and foreign scientists in the field of production management paid attention to studying of decision-making process and the factors influencing their quality. It is necessary to distinguish such experts as G. Ford, F. Teylor, A. Fayol, G. Emerson, P. Draker, S. Yaung, M. Meskon, F. Hedouri, H. Saymon, A. Nevil, T. Russell, R. Teylor, V. L. Makarov, V. M. Polterovich, B. G. Kleyner, H. N. Gizatullin, A. I. Tatarkin, O. C. Vikhansky, R. A. Korenchenko, A. I. Naumov, R. A. Fatkhutdinov [1-13]. The result of researches of these authors is development of efficient methods and decision making procedures in various administrative situations at any emergence of problems.

Risk problems in a decision making consider in the researches of J. Von Neyman, D. Allen, M. Meskon, I. Kh. Ansoff, S. Bir, V. Rove, U. Nayms, P. Slovik, K. Frost and also Russian and Ukrainian scientific A.G. Badalova [1, 2], E.N. Bulanova [3], A. E. Voronkova [4], O.A. Dedov [6], N. Kalyuzhnaya [10], I.V. Pronina [18], A.L. Slobodskiyu [19]. In their works the analysis of the reasons and sources of emergence of economic risks of the enterprise is carried out, techniques of the quantitative and quality standard of risks are offered.

As for such problem as the accounting of personnel risks at an alternative choice at adoption of administrative decisions, to this aspect of attention practically it was not given.

In practice of management most often use the following methods of an assessment and a choice of alternatives:

- 1) In the conditions of a determinacy:
 - creation of hierarchical semantic structure;
 - bootstrapping (analogies or reproduction);

- preferences method;
- lexicographic method;
- "a displaced ideal" method;
- 2) In the conditions of indeterminacy:
 - probability statement of adoption of preferred solutions;
 - theory of statistical decisions;
 - method of a consequence of events;
 - game theory method;
 - creation of trees of decisions method;
 - the analysis of hierarchies method [1].

Thus any of above-mentioned methods does not consider influence of personnel risks on possible development of a situation.

As for methods of an assessment of personnel risks, they can be grouped as follows:

The first group — calculated and analytical methods of an assessment (conditions of complete certainty). Indexes of personnel risk in this case are determined generally by data of personnel audit [2, 3].

The second group — probability and statistical methods of an assessment. Are used at partial indeterminacy when information on a risk situation exists in the form of probability of emergence of risk events and the risk is respectively considered as probability category. Are thus applied probability and statistics of an assessment of risk [4].

The third group — expert methods of an assessment. These methods can be used in the conditions of the complete indeterminacy when information on a risk situation is absent completely. With their help it is possible to receive information necessary for decrease in degree of indeterminacy and adoption of the reasonable personnel decision [5].

These methods are focused on an assessment of personnel risks as a self-contained task and directed on a decision making about management of mainly personnel risks and increase of personnel safety.

Thus, need of more detailed analysis of influence of personnel risks on results of the decision defined a choice of the direction of research.

STATEMENT OF THE MAIN MATERIAL

For upgrading of the decisions made at the enterprise, the factor of personnel risks has to be one of criteria of a choice of optimum alternative.

Personnel risks are a deviation from the planned purposes or decrease in expected effect from planned which results from any action or an inaction of a term of group of employees of the enterprise united in a process of manufacture.

The technique offered by the author can be used for an assessment of personnel risks as a self-contained task, or for the analysis of alternatives and a choice of optimum version of the administrative decision. In the second case she assumes comparison of characteristics and risk degree on each alternative and a choice of a

candidate solution, in which risk minimum. Thus available alternatives are ranged on the basis of personnel risk on accepted completely, accepted conditionally and unacceptable in general. Results of ranging are considered at a choice of an optimum candidate solution. The assessment of personnel risks at a stage of a decision making can bring the greatest benefit and increase effectiveness of adoption of administrative decisions. The developed technique includes sequence of decision-making on the basis of an assessment of personnel risks (fig. 1).

The analysis of alternatives in the course of decision-making provides serial consideration of all candidates solution with determination of advantages and shortcomings of each option by all possible criteria, including on a factor of personnel risks.

When developing a technique of an assessment of alternatives on a factor of personnel risks it is expedient to follow the principle of reasonable sufficiency, i.e. to consider only those risks which most significantly influence results of the decision. Therefore in this technique all possible personnel risks are grouped in particular categories. Further we will consider indexes and methods of an assessment of personnel risks on each

Individual personnel risks

1) Biological personnel risks:

- psychophysiological features – quality standard (0 – 1);
- risks of discrepancy of age structure of the personnel – the quantitative assessment (coefficient of age structure of the personnel: relation of unit to coefficient of pair correlation).

2) Socially - psychological personnel risks:

- discipline level – quality standard (0 – 1);
- risks associated with conflict – the quantitative assessment (a ratio of quantity of the conflicts at the worker and total of the conflicts, expressed as a percentage).

3) Spiritually – intellectual personnel risks:

- education level and cultures – quality standard (0 – 1);
- creative potential – quality standard (0 – 1).

4) Economic risks:

- level of abuses – quality standard (0 – 1).

Organizational personnel risks

1) Personnel risks on an entrance:

- quality of system of personnel selection – quality standard (0 – 1);
- index of realization of functions – the quantitative assessment (a ratio of number of qualitatively executed functions upon and number of the planned functions).

2) Personnel risks in the course of functioning:

- the risks bound to advance on a career ladder – quality standard (0 – 1);
- risks of an assessment and certification - quality standard (0 – 1);
- risks of safety – quality standard (0 – 1);

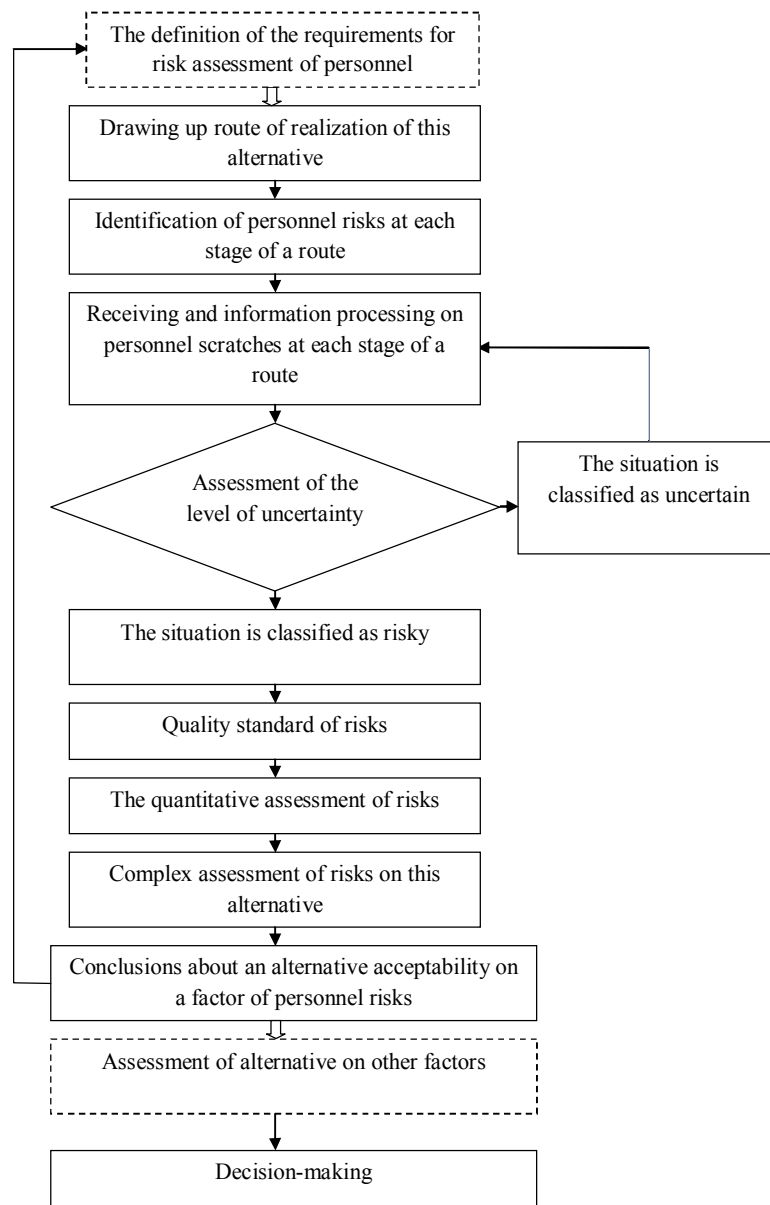


Fig. 1. Sequence of decision-making according with an assessment of personnel risks

- risks of rationing – quality standard (0 – 1);
- the risks bound to tutoring – the quantitative assessment (a ratio of expenses for tutoring and economic efficiency of tutoring);
- the risks bound to career guidance of the worker – the quantitative assessment (a ratio of correctly carried out professional tasks and the total number of tasks);
- the risks connected with management career – the quantitative assessment (a ratio of number of the workers accepted to key positions from the outside and number of workers, "grown" to a higher position in the organization);
- risks of discrepancy of qualification of workers to level of complexity of works – the quantitative assessment (a ratio of the average tariff category of workers and the average tariff category of works);

- the risks bound to adaptation of the personnel – the quantitative assessment (the sum of indexes taking into account weight of each of them: coefficient of productivity of methods of adaptation, the sum of the used resources on one worker in the course of adaptation, percent of the trained instructors, percent of extension of a trial period, level of skills of the instructor, ease of development of the methods used at adaptation);
- risks of motivation – the quantitative assessment (a ratio of number of the workers who have left at own will and for violation of labor discipline and average number of workers);
- risks of the organization of work – the quantitative assessment (a ratio of number of failures in work and in time the blurred-out operations);

- risks of scheduling of the quantitative and qualitative requirement for the personnel – the quantitative assessment (a ratio of number of the personnel in a section of positions upon and number of the personnel necessary on standards);

- risks of discrepancy of number of the production personnel – the quantitative assessment (a ratio of the actual number of the production personnel and the number corresponding to the expected perspective power of the enterprise);

- risks of discrepancy of number of the administrative and non-productive personnel – the quantitative assessment (a ratio of the actual charges of the administrative and non-productive personnel and economically necessary them I will drop, calculated proceeding from planned profitability and the actual volume of realization);

- risks of possible loss of qualified personnel – the quantitative assessment (the relation of work of an average monthly salary and coefficient of a regularity of payment of a salary competitors to work of an average monthly salary and coefficient of a regularity of payment of a salary at the analyzed enterprise).

3) Personnel risks at the exit:

- risks of untimely reduction and replacement of workers – quality standard (0 – 1).

Thus, the offered system of indexes of an assessment of personnel risks is enough the complete as considers practically all types of personnel risks. Nevertheless, the offered indexes are not unique and can change; on their choice affect both external, and internal factors: objectives, level of the made decision, possibility of obtaining necessary information, financial condition, etc.

For an assessment of degree of risk at each stage of implementation of the decision information characterizing conditions by the form of personnel risks has to be collected. Received information will allow to establish indeterminacy level in the sphere of personnel risks. As for each source of information degree of expressiveness of each characteristic differs, offered a five-point rating scale of quality of information.

As sources of information are used:

- organizational documents;
- polls of employees;
- expert estimates.

At identification of risks by a defining factor quality of used information is. Quality of information is defined by the following key parameters:

- reliability;
- objectivity;
- timeliness;
- reliability;
- completeness of coverage.

As absolute completeness, reliability, reliability and objectivity of information on personnel scratches cannot

be reached, the situation of lack of indeterminacy cannot be considered even at the maximal estimates.

On the basis of the offered scales the generalizing assessment of the informative conditions bound to personnel risks on considered alternative of the decision is defined. The generalizing assessment pays off as prime average arithmetic of estimates on each stage of implementation of the decision.

At a high level of indeterminacy of the conditions bound to personnel risks, they or are not considered at all at an assessment of alternatives, or the stage of collecting and information processing repeats until then when it will be possible to speak about increase of level of a determinacy of information till accepted.

At acceptable level of indeterminacy procedure of an assessment of personnel risks on each alternative is started. It includes:

- 1) Quality standard.
- 2) The quantitative assessment.
- 3) Complex assessment.

Quality standard of personnel risks provides:

- definition of conditions of emergence of risk;
- determination of risk factors; -
- definition of indexes of risk.

The quantitative assessment of personnel risks provides:

- determination of weight coefficients;
- definition of criteria of an assessment;
- development of rating scales;
- drawing up the summary table of the quantitative assessment;
- calculation of a generalizing index of personnel risk.

Weight coefficients are defined for an assessment of influence of each type of risk on generalizing assessment. For the accounting of a share of influence of each view of a risk level the specific weight coefficients expressed in shares of unit are used.

The quantitative assessment is carried out on the basis of the data received at quality standard, that is only those scratches which are present at this stage of implementation of the decision will be estimated. Can be estimated both simple types of risks, and groups. Join of types of risk in groups is carried out for more complete accounting of their influence on a common risk level.

The rating scale of risk constructed by means of statistical methods, is presented in table 1 [6].

This estimating scale is used at determination of admissible values of risk at each stage of implementation of the decision.

For each type of risk or group the individual scale is formed. By drawing up estimating scales each numerical value in points is interpreted by the detailed description of the corresponding risk conditions. The advantage of this approach is that the experts involved in the assessment are formed unified criteria of assessment.

Table 1. Rating scale of personnel risks

| Risk level | Risk characteristic |
|------------|---|
| Till 0,2 | The minimum The probability of approach of the negative results is extremely small; personnel scratches which negatively influence results of the decision, practically are absent. |
| 0,2 - 0,4 | Small The probability of approach of the negative results of the decision is insignificant; personnel scratches which negatively influence results of the decision, are not essential. |
| 0,4 - 0,6 | Average The probability of approach of the negative results is essential, level of personnel risks can complicate implementation of the decision. |
| 0,6 - 0,8 | High The probability of approach of the negative results the considerable, level of personnel risks can interfere with implementation of the decision. |
| 0,8 - 1,0 | Critical The probability of approach of the negative results maximal, level of personnel risks threatens implementation of the decision |

Table 2. The card of an assessment of personnel risks on alternative No. 1

| Types of personnel risks | Stages of implementation of the decision | | | | |
|---|---|------------|------------|------------|-----|
| | 1 | 2 | 3 | 4 | ... |
| 1. Biological | 0,59 (2,25) | | | | |
| 2. The social and psychological | 0,2 (2,5) | 0,3 (2,6) | | | |
| 3. Spiritually - intellectual | 0,2 (3,0) | | | | |
| 4. Economical | 0,2 (2,5) | | | | |
| 5. Personnel risks bound to entrance on enterprise | | 0,26 (3,0) | 0,35 (3,0) | | |
| 6. Personnel risks bound to process of work at enterprise | 0,2 (2,25) | 0,3 (2,25) | 0,34 (2,0) | 0,35 (2,1) | |
| 7. Personnel risks bound to exit from enterprise | | 0,2 (3,0) | 0,25 (3,0) | | |
| Complex assessment of risk | 0,28 | 0,26 | 0,31 | 0,35 | |
| Complex assessment of information | 2,5 | 2,7 | 2,61 | 2,1 | |
| Assessment of an acceptability of alternative | 0,3 | | | | |
| Conclusion about an alternative acceptability from the point of view of personnel risks | 0,1 - 0,4 it's acceptable 0,4 - 0,7 it's acceptable conditionally 0,7 - 1,0 it's not acceptable | | | | |

For an assessment of a type of risk on group the summary table in which the assessment of risk by each look is corrected taking into account weight coefficient is used. The generalizing assessment by this type of risk is determined as average weighed of estimates by all types. The trust to an assessment of risk depends on quality of information according to which it was received. Therefore the summary table joins also information evaluation test. The rating scale of quality of information is for this purpose used.

The assessment of risk on group taking into account weight coefficient and quality of information is made by all types of risk revealed at this stage of implementation of the decision and on all stages, falling into to this alternative [7].

The result of an assessment of personnel risks on considered alternative is provided in the summary table of the quantitative and qualitative estimates, namely in the card to an assessment of risks. The assessment of an acceptability of alternative is determined as average weighed according to risks by each stage where as weight information evaluation test is accepted. The example of the card of an assessment of personnel risks on one of alternatives is presented in tab. 2.

The offered technique of an assessment of personnel risks is based on the following principles:

1) Objectivity – consists in the adequate description of initial parameters of an assessment with use of the scientific methods which are most reducing subjectivity of an assessment.

2) Efficiency – assumes timeliness and fastest estimates.

3) Productivity – obligatory and expeditious acceptance of effective measures by results of an assessment.

4) Complexity – allows to consider the greatest possible quantity of indexes.

5) Substantial uniqueness – relatives according to the contents factors owe baht are excluded from an assessment.

6) Balance – selection of such quantity of indexes which, on the one hand, would be enough for a complex assessment of personnel risks, and, on the other hand, which will not overload and complicate assessment procedure.

CONCLUSIONS

Thus, the offered technique of an assessment of alternatives assumes application of a complex assessment of personnel risks, Results of an assessment

of personnel risks can be used not only for upgrading of the made administrative decision, but also for definition of the directions of development of the personnel and perfecting of all organization.

The card of an assessment of the personnel risks, made at the final stage of an assessment, can be used for identification of the most problem from the point of view of the personnel of sites of division or the enterprise.

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