

Models of Making Management Decisions

Olena Kryvoruchko¹, Yevgeniy Borodavka²

¹Kyiv National University of Trade and Economics, 19, Kyoto St., Kyiv 02156, Ukraine

²Kyiv National University of Construction and Architecture, 31, Povitroflotskiy Ave, Kyiv 03680, Ukraine

Abstract: *This paper is dedicated to analysis most important reserves for the improvement of the public production efficiency. This goal can be reached by the rising of the making decisions quality based on the improvement of the making decision process. For our research we had to analyze different types of the management decisions classification and combine its to one scheme. Also we distinguish the common factors which make significant impact on the management decision efficiency. As the conclusion we propose the method of the making decisions quality improvement and provide the common problems in this field.*

Keywords: management decision, management decisions classification, management decisions efficiency, making decisions quality.

1. Introduction

Technology of the making decisions consists of the management operations and procedures sequence – the problem diagnostics; determination of the possible solving methods; options estimation; advantageous option selection. The methods which allow solving described problems are the methods of the problem study (or diagnostics). The important place at these methods belongs to the methods of accumulation, processing and analysis of information, factor analysis, comparison, analogy and so on. The choice of the method depends on character and content of the problem, deadlines and budget. In particular, there are two prevalent groups of the methods: the methods of economic analysis and the methods of prediction.

2. The Main Research

2.1 The feature of the management decisions

For efficient activities of state enterprises and organizations it is need to determine the important goals. The achievement of these goals is possible only if some actions are executed in determined succession. These actions are the method of the partial problem solving.

During organization activities the decisions about organizational structure, production process implementation, works distribution and support are making.

Control is assuming the making decisions about the control system selection (extent, period and forms of control), the obtained information analysis and correction. The success of organization depends on the level of the correction relevance.

The Management Decision – the result of the managed subject's choice of the action method with purpose to solve the problem in existing or modeling situation [5, 8, 9].

The management decisions aimed at resolve the concrete management problems which are characterized by: 1) indetermination and contradicting conditions; 2) the lack of information and strict action algorithms; 3) time constraints.

There are three common types of the management tasks: 1) conceptual (strategic task for long-term planning and predicting); 2) related to technical and technological aspects of the production operating (design and introduction of the new facilities and technologies); 3) task related to human factor (human resources, social and psychological atmosphere in collective etc.).

Thus, the management process it is complex of the interconnected operations which are performing with certain sequence and aimed to resolve the concrete problems and goals achievement.

The most important reserve of the efficiency rise is the increase of the management decisions quality.

Nowadays the term “decision” is very many-valued. It can be treated as the process of selection or as the act of selection and as a result of selection. The basic cause of the ambiguity of term “decision” is the different content due to concrete research field. The management decision must satisfy to requirements:

- All-round substantiated;
- Timely;
- Necessary fullness of content;
- Authority;
- Consensus with preliminary decisions.

All-round substantiated means necessity to make it based on full and authoritative information. However it is not enough. It must to embrace full range of problems and whole fullness of the system requirement. It needs knowledge of the features and ways of the development managed systems, managing systems and the environment. It needs accurate analysis of resource provision, science and technical resources, objective functions of development, economic and social prospects of organization, region, sector, national and world economy. All-round substantiated of the decisions demand searching of the new form and ways of the science-technical and social-economic information processing, i.e. creation of the progressive professional opinion, evolution of their analytics and predictive functions. Opportuneness of the management decision means that decision neither straggles nor forestalls

necessity and problems of social-economic system. The untimely decision cannot find prepared ground for its implementation and development, and may lead to negative tendency. The late decisions are also harmful for society. It not helps to resolve overgrown problems and even increase the ailing processes [11-13].

Requirement fullness of the decisions content means that the decision must envelop whole managed object, all range of its activity and all directions of its development. In general any management decision must envelop the following:

- The purpose (collection of the goals) of functioning and development of the system;
- Means and resources which used for the goals achievement;
- Basic ways and methods for the goals achievement;
- Terms of the goals achievement;
- Order of the cooperation between subdivisions and executors;
- Ensuring of works accomplishment on every stages of decision implementation.

The important demand of the management decision is authority (power) of the decision – strict observances of the management subject his rights and authorities. Balance of the rights and responsibility of each link and each level of management is the real problem.

The agreement with preliminary making decisions means compliance with clear relationship of cause and effect in social development. It is necessary for tradition of law-abidingness and for realization science, technical, market and social politics.

The making of the management decisions needs high level of professionalism and availability of social-psychological personal features. But only 5-10% of specialists with professional degree have its features [7-9].

The general factors of influence on the quality of the management decision are using in system of project management: the science approach and principles, methods of modeling, methods of the automatized management theory and so on. Commonly three basic moments are using in the making of any decision: intuition, judgment and rationality.

The great factor of the making decision intensification is the contemporary computer information technology and networks. It demands high level of professionalism in the fields of mathematics and programing. But the process of the making decision will always be creative and depends on person who makes decision.

2.2 The management decisions classification

The management decisions classification needs for determination of common and particular approaches to its development, implementation and estimation. It allows increasing quality, efficiency and succession of the decisions. The management decisions can be classified in different ways

(Fig. 1). The most distributed are following classifications:

- By functional content;
- By field of activity;
- By hierarchy of the management;
- By character of work arrangement;
- By character of the goals;
- By cause of the origin;
- By initial development method;
- By organizational regulation.

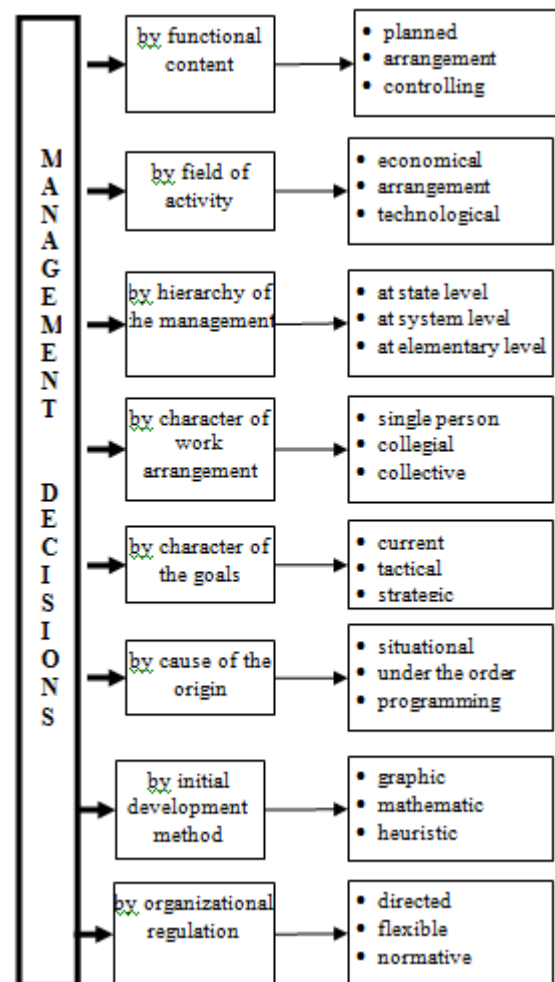


Figure 1: Classification of the management decision

So far as the decisions are making by human its character has an imprint of manager personality. Due to this fact the decisions are classified on balanced, impulsive, inactive, risky and not risky [1, 2, 6].

The balanced decisions are making by managers with carefully and critically self-apprising and treatment of hypotheses. Before making decision manager needs to formulate initial idea (Fig. 1).

Authors of the risky decisions do not need a thorough grounding their hypotheses and that is the difference between the risky decisions and the impulse decisions. And if the authors have strong confidence in themselves, they cannot be scared of any threats.

The not risky decisions are result of very carefully apprising of all options by a manager. These decisions also characterized by more critical approach to choosing. The novelty and the originality of these decisions are lower than in the inactive decisions.

The listed types of decisions are making during active management of personal. For strategic and tactical management of any subsystem in the project management system the rational decisions are making based on the methods of economic analysis, argumentation and optimizing.

2.3 The determining factors of the management decisions quality and efficiency

The quality of the management decisions is the degree of its relevance to character of the functioning problem which allows the project management system to be constantly evolving. That is means that the management decisions allow many ways to system evolving nevertheless at any condition of the economic relations.

The determining factors of the management decisions efficiency can be classified by different features – the internal factors (related to managing and managed systems); the external factors (the environment influence). There are nine general distinguished factors [3, 4, 7]:

- 1) The laws of the objective world related with making and implementation of the management decisions;
- 2) The clear formulating of the goal – for the sake of that the decision is making, which real results can be achievement, how to measure and compare the goals and the results;
- 3) The amount and value of the information – the primary for the successful management decision making is not the amount of the information but the value of it as a result of professional degree, experience and intuition of personnel;
- 4) The management decisions development time – as usually the management decision always is making with lack of time and with extraordinary circumstance (lack of the resources, competitors activity, market situation, unexpected behavior of the politicians);
- 5) The arrangement structures of the management;
- 6) The forma and the methods of the management activity;
- 7) The methods and the techniques of the development and implementation of the management decisions (for example if an organization is the leader it use one kind of the technique, if not – another);
- 8) The subjectivity of the decision selection assessment. The more management decisions are extraordinary the more subjectivity assessment;
- 9) The system of the expert assessments of the quality and efficiency level of the management decisions [13].

The management decisions must to base oneself upon the objective laws and rules of the social development. But from another hand the management decisions depend on plurality of the subjective factors – the logic of the decisions development, the quality of the situation assessment, the problems structuring, the level of the management culture, the mechanism of the decisions implementation, the

executors discipline etc.

But it needs to be remembered; even thoroughly planned decisions can be ineffective if they could not predict possible changes in a situation or in a productive system state.

3. Conclusion

The improving of the making management decisions process and the quality of the decision can be reached with using of the science approach, the models and the methods of the making decisions.

The stages of the model creation are the following:

- Formulation of the problem;
- Informational restrictions determination;
- Possibility check;
- Conclusions and restore model implementation.

The common problems of the modeling are doubtful preconditions, informational restrictions, bad using of the results and excessive expenses.

References

- [1] Program of the economic reforms for 2010-2014 years (Committee on Economic Reforms under the President of Ukraine).
- [2] The order of the development and execution of the state specific programs which are confirmed by decree of Cabinet of Ministry of Ukraine from 31.01.2007 № 106.
- [3] S.D. Bushuev, N.S. Bushueva, I.A. Babaev, V.B. Yakovenko, E.V. Grysha, S.V. Dziuba, A.S. Voytenko, Creative technologies of the project and program management, Monograph, "Summit-Book", 2010.
- [4] S.D. Bushuev, N.S. Bushueva, The project management; the basics of the professional knowledge and the system of the competence assessment of the project managers, IRIDIUM, 2006.
- [5] S.V. Tsiutsiura, Management of the innovative projects of the enterprises modernization in the power-consumption fields, Monograph, "Science world", 2007.
- [6] T.L. Saati, The decision making. The method of hierarchy analysis, "Radio and communication", 1993.
- [7] V.M. Kolpakov, Theory and practice of the management decision making, MAUP, 2000.
- [8] A.A. Lityagin, The real aimed management. The practice of the real introduction and using of Lityagin's GOAL-technology, Alpina Publishers, 2010.
- [9] A.K. Klochkov. KPI and personnel motivation. Full collection of practical tools, Eksmo, 2010.
- [10] S.V. Tsiutsiura, M.I. Tsiutsiura, "Mathematical formulation of the problem of the project works optimization in modernization project planning," Project management and production development (25) pp 36-41, 2008.

- [11] M.I. Tsiutsiura, "The structure development for the model of the directed project management. The problems of infrastructure efficiency increase," Science work collection of NAU, pp. 5-12, 2009.
- [12] Introducing KPI in government sector. Possible futures for HR functions. David Owens and Anne Keegan, 2008.
- [13] David Parmenter Key Performance Indicators: Developing, Implementing and Using Winning KPI's. – New Jersey, USA: John Wiley & Sons, inc., 2007.

Author Profile



Mrs. Olena Kryvoruchko received engineer-economist qualification in "economy and arrangement of groceries industry" from Kyiv Technological Institute of Food Industry in 1991. Since 1991 worked in the leading campaigns of Ukraine in the area of food industry as an economist. Since 2000 she works in Kyiv National University of Trade and Economics. She received Ph.D. degree in information technology in 2003 and she got a scientific rank of associate professor of economic cybernetics and information systems department in 2008. Presently she is associate professor of the economic cybernetics and information systems department in the Kyiv National University of Trade and Economics.



Mr. Yevgeniy Borodavka received B.Sc. and M.Sc. degrees in computer science and Ph.D. degree in computer aided design from Kyiv National University of Construction and Architecture, Ukraine, in 2002, 2003 and 2009, respectively. Since 2005 assistant professor and since 2009 associate professor of the Information Technologies of Design and Applied Mathematics department in Kyiv National University of Construction and Architecture, Ukraine. Since 2004 to 2009 – lead engineer and since 2009 to 2012 – senior scientific staff in State Enterprise "State Research and Development Institute of Computer Aided Design in Construction". Since April 2013 is lead engineer in Samsung Research and Development Institute Ukraine (SRK).