VOL 1, No 56 (56) (2020)

The scientific heritage
(Budapest, Hungary)
The journal is registered and published in Hungary.
The journal publishes scientific studies, reports and reports about achievements in different scientific fields.
Journal is published in English, Hungarian, Polish, Russian, Ukrainian, German and French.
Articles are accepted each month.
Frequency: 24 issues per year.
Format - A4
ISSN 9215 — 0365

All articles are reviewed
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CONTENT

TECHNICAL SCIENCES

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PRINCIPLES OF INTEGRATED COUNTER RISK MANAGEMENT OF SCIENTIFIC PROJECTS IN CONDITIONS OF UNCERTAINTY AND BEHAVIORAL ECONOMICS

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DOI: 10.24412/9215-0365-2020-56-1-3-6

Abstract
The principles of integrated counter risk management of scientific projects in conditions of uncertainty and behavioral economics have been proposed in the study. Based on the analysis of previous works, the need to improve the efficiency of human resources management of scientific projects through the use of performance indicators has been identified. The principles of the integrated counter-risk management of a scientific project in the conditions of behavioral economics, which can be applied in the process of human resource management of scientific projects, are considered.
Keywords: scientific project, principles, integrated counter risk management, conflicts, factors, behavioral economics.

Introduction. The dynamic development of science and technology requires humanity to constantly update and improve knowledge and skills, personal development and competence [1, 2]. One of the main aspects of their development is the growth of high-tech activities and strengthening the innovation orientation of enterprises. Proceeding from the fact that scientific activity is creative and intellectual, it also requires constant development from scientists, updating knowledge and skills. Scientists from all over the world and our country are conducting research to improve the efficiency of project, program and portfolio management [3].

Review of publications on the topic. The complexity of internal and external processes of a scientific project and the relationship between its stakeholders leads to risks and conflicts that can be caused by factors of behavioral economics. Therefore, it is necessary to take a systematic approach to the analysis of stakeholders in a scientific project, develop a unified approach to integrated management of risks and conflicts of stakeholders in a scientific project in a behavioral economics [4].

In work [5], the author proposed a conceptual model of integrated counter risk conflict management of a scientific project in a behavioral economics, which was built on the basis of the "Iceberg of change management" model, which allowed integrating such methodologies as project management, stakeholder theory, risk management, HR management, conflict management, behavioral economics.

Methodology of science (from the Greek methodos – method, and logos – science, knowledge) is a system of methodological and methodic principles and techniques, operations and forms of scientific knowledge construction [6]. The philosophical level of methodology functions as a general system of dialectical principles. It forms the worldview concept of world science, i.e. the basic initial theoretical positions that have been established in science and which are equally necessary to know.

Therefore, methodology cannot be a simple combination of methods, models and means of cognition. A logical system of interconnections should be improved, and the principles of the methodology are precisely the factor that ensures the complementarity of all components [7].

The work [8] defines the principles of strategic management of the enterprise, in particular: scientificity, purposefulness, flexibility, unity and creation of conditions.

The author in [9] analyzes modern approaches to strategic business management and provides the need for a close relationship between strategic and project management.

Based on the research of modern methodologies, features and principles of strategic, project, program, portfolio management, the principles of S3P-management of medical institutions were formulated [10], in particular: "Purposefulness – Priority", "Consistency – Compliance", "Perspective – Stepping", "Sustainability – Flexibility", "Implementation – Organizational support".

According to the analysis results of the scientific heritage of scientists in the field of personnel management, it can be argued that the efficiency of human resource management in scientific projects can be reflected by indicators that characterize, on the one hand, the efficiency of labor activity of workers, and on the other hand, the efficiency of performing certain personnel functions and processes [11]. Proceeding from the fact that the process of labor activity of personnel is closely related to the production process and its final results, social activities, economic development and other areas of the enterprise, the performance indicators can be grouped into three categories, in particular: the use of the final results of the enterprise; efficiency, quality and complexity of work; indicators of social efficiency [11, 12, 13].This indicates the need to improve the efficiency of human resource management in scientific projects to ensure their successful planning and implementation.

The aim of this study is development of the principles of integrated counter risk management of a scientific project in conditions of uncertainty and behavioral economics.

Results and discussion. The management of human resources and stakeholders of a scientific project should focus on trends in the development of the industry and technologies and project management plans, achieving the main goals and meeting the needs of all stakeholders of the scientific project [12, 14].

The main tasks of human resource management for a scientific project are to improve: personnel policy; use and development of human resources; selection and implementation of a style for team management of a scientific project; organization of horizontal coordination and cooperation; improvement of the organization of workplaces and working conditions; recognition of personal achievements in work; stimulation and encouragement.

In addition, the task of human resource management for a scientific project is to ensure its compliance with the following requirements: a sufficient amount of resources; their availability at the right time; relevant qualifications; creative and intellectual potential; presence in the right place.

Today, domestic scientists interpret the principles of human resource management as a set of fundamental principles of human resource management and objective rules of managerial behavior, the consistent observance of which is a prerequisite for achieving current and strategic goals, ensuring the efficiency of cooperative labour, as well as meeting the needs of stakeholders in a scientific project [11, 13, 14].

To build a system of principles of integrated counter risk management of scientific projects in conditions of uncertainty and behavioral economics, the author proposes to use Maslow's pyramid, which, by analogy with human needs, reflects the principles from the simplest to the most sublime [15].

The author proposes to supplement and clarify the above principles in terms of their application to the integrated counter risk management of scientific projects in conditions of uncertainty and behavioral economics, as well as taking into account their peculiarities (Fig. 1).

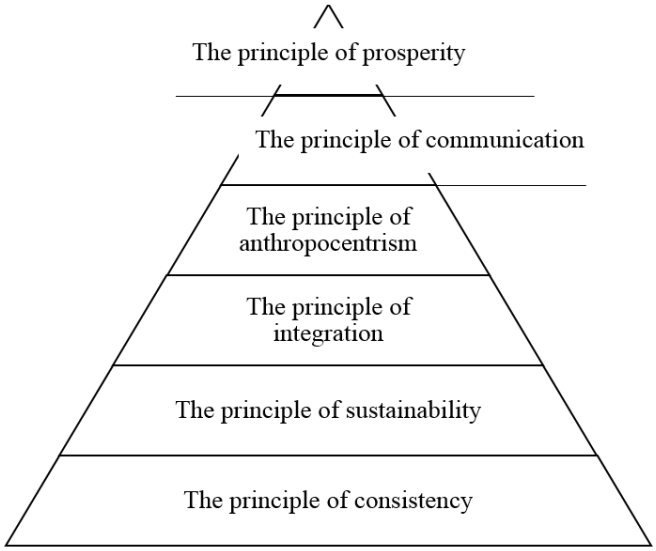

Fig. 1. Principles of integrated counter risk management of scientific projects in conditions of uncertainty and behavioral economics

1. The principle of consistency. It makes it necessary to implement a systematic approach in the management of scientific projects, its stakeholders and human resources as an integral social and technical object.

The implementation of this principle will allow timely, systematically and consequently management of personnel risks, conflicts and factors of the behavioral economics to ensure the successful implementation of a scientific project and meet the needs of all its stakeholders.

2. The principle of sustainability. It determines the absence of unforeseen and unauthorized interruptions in the work of team members of a scientific project, disruption of communication between stakeholders in the planning and implementation process, in particular, which may be caused by the impact of personnel risks, conflicts and factors of the behavioral economics.

To do this, it is necessary to ensure constant tracking of the timing of work, reduce the time for preparing and handling documents for the project, the absence of downtime of technical equipment, minimization of non-productive costs of the project and loss of working time.

3. The principle of integration. It is a combination of parts, elements and components that previously existed and were considered separately, with the complication and strengthening of the connections between them; formation of unity between separate elements by revealing common features and characteristics between them.

This principle allows the integration of personnel risks, conflicts and factors of behavioral economics into a single whole according to certain features and a comprehensive analysis of these characteristics for each stakeholder of a scientific project.

4. The principle of anthropocentrism. It is necessary to provide an opportunity for each stakeholder of a scientific project to participate in the discussion of

proposals for planning and implementation of the scientific project, substantiation and management decisions of the scientific project.

This will reduce the probability of personnel risks, conflicts and factors of the behavioral economics and their impact on the research project, in particular: organizational risks; social and psychological risks; spiritual and intellectual risks; conflicts over personal relationships; epistemic self-confidence; Dunning-Kruger effect; mistakes of optimism and pessimism; conflict of interest; egocentrism.

5. The principle of communication. The leader of a scientific project and his team, scientists will work productively and efficiently if mutual understanding and balance of interests is achieved between all stakeholders of the scientific project, and decent, socially justified and substantiated working conditions are provided, taking into account the impact of personnel risks, conflicts and factors of behavioral economics. This means that the management plan for a scientific project is adapted to the changing conditions of its internal and external environment, the goals of the scientific project, the intellectual, competence and creative potential of the project manager and members of his team, scientists and stakeholders.

It defines the need to take into account the goals and requirements of the stakeholders of a scientific project by clearly distributing authority between the leader of the scientific project and members of his team vertically and horizontally, defining the administrative subordination of each team member to one leader, defining their areas of responsibility and authority. It requires an objective assessment of the management plan for scientific projects by taking into account, at the planning stage, the impact of personnel risks, conflicts and factors of the behavioral economics, which can lead to the disruption of its implementation.

It requires an optimal combination of one-man management and personal responsibility of the leader of a scientific project and members of his team, scientists, which, in turn, will avoid or minimize the impact of personnel risks, conflicts and factors of the behavioral economics; careful substantiation of direct and indirect costs of human resources for a scientific project, investments in their development in order to form and improve professional competencies and the ability to work in a team, creation of a flexible system of incentives that would prompt the leader of a scientific project and his team members to work with full dedication, show creativity and susceptibility to innovation.

The implementation of this principle will minimize the negative impact of personnel risks, conflicts and behavioral economics on the scientific project, in particular: the risks associated with the confidentiality of information in the project; conflicts due to holding several positions (roles) in the research team; conflicts arising from involvement in activities outside the main scientific organization; emotional condition; conflict of interest; unproductive communications.

6. The principle of prosperity. In the process of planning the scientific projects it is necessary to take into account the prospects for the development of the state, industry, research institution, scientists, the introduction of new technologies and management systems.

When forming stakeholder management for a scientific project, it is necessary to take into account the potential risks and threats that may be caused by personnel risks, conflicts and factors of the behavioral economics.

It requires that all processes, procedures, operations, actions that take place in the process of stakeholder management in a scientific project are carried out in accordance with the project charter and project management plan, taking into account the impact of personnel risks, conflicts and behavioral economics.

These include, in particular: risks associated with an ineffective system of motivation and incentives; conflicts that arising due to the use of resources of a research institution; conflicts arising from material and financial interests; excessive funding of tasks; revaluation of monetary resources.

Results and discussion. After analyzing the principles of integrated counter risk management of the scientific projects, which are built by analogy with strategic and personnel management, we can conclude that such principles are used in the methodology of project management. Therefore, it is proposed to conduct further research on the management of scientific projects by stakeholders, taking into account personnel risks, conflicts and factors of the behavioral economics.

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FUNCTIONAL PRODUCTS, THEIR PROPERTIES AND FUNCTIONS

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Abstract

The article deals with the functions and properties of functional dairy products according to the systematization of terms, in relation to functional foods initiated by the introduction of GOST 52349-2005 "Food, food functional. Terms and definitions ", which was introduced on July 10, 2006.

Keywords: prebiotics, probiotics, bifidobacteria, lactobacilli, fruit and berry enrichments, thickeners, fermented sour milk desserts.

In recent years, there has been a steady increase in the consumption of functional products. Their popularity is due to the variety of taste, composition, consistency, which meets the needs of a wide range of consumers. Ingredients that give products functional properties meet the following requirements: have a positive effect on nutrition and health, are safe in terms of a balanced diet, have accurate physico-chemical parameters, should not reduce the nutritional value of products, taken orally as food, have the appearance ordinary food, be natural [2].

The standard defines a functional food product as a product intended for systematic consumption in the diet of all age groups of a healthy population. It reduces the risk of eating disorders, maintains and improves health due to the presence of physiologically functional foods.

Physiologically functional food ingredient - a substance or complex of substances of animal, vegetable, microbiological, mineral origin or identical to natural, as well as living microorganisms that are part of a functional food product that can have a subtle effect on one or more physiological functions, metabolic processes in the human body under the condition of systematic consumption in quantities ranging from 10 to 50% of the daily physiological needs. Physiologically functional food ingredients include biologically active and (or) physiologically valuable, safe for health: dietary fiber, vitamins, minerals, polyunsaturated fatty acids, probiotics, prebiotics or synbiotics.

Functional products, similar to dietary supplements, perform the following functions:

Compensate for deficiencies of biologically active components in the body;

Support normal functional activity of organs and systems;

Reduce the risk of various diseases, create a dietary background;

Support the beneficial microflora in the human body and the normal functioning of the gastrointestinal tract.

The EU Food Act defines a functional product as follows: "Functional food is any modified food or food ingredient that may have a beneficial effect on human health in addition to the traditional nutrients it contains." According to some sources, the European market for functional products in 2003 was estimated at $ 3.3 billion, of which functional dairy products accounted for 65%, bakery products - 9, various pastes, soft cheeses, jams and other types 23, drinks that have a positive effect on human health (vitaminized and therapeutic for athletes, the elderly, pregnant women, etc.) - 3%. In the United States in 2003, revenue from the sale of functional foods to the population amounted to 44.1 billion dollars [2].

The main function of food can be considered to strengthen human health. According to the definition of the Federal Law on the Production of Foodstuffs and Essentials (LMBG, Germany), foodstuffs are substances that are mainly consciously and unconsciously

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