

ISSN 2518-1483 (Online),
ISSN 2224-5227 (Print)

2019 • 6

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ
БАЯНДАМАЛАРЫ

ДОКЛАДЫ

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК
РЕСПУБЛИКИ КАЗАХСТАН

REPORTS

OF THE NATIONAL ACADEMY OF SCIENCES
OF THE REPUBLIC OF KAZAKHSTAN

PUBLISHED SINCE 1944



ALMATY, NAS RK

Б а с р е д а к т о р ы
х.ғ.д., проф., ҚР ҰҒА академигі **М.Ж. Жұрынов**

Р е д а к ц и я а л қ а с ы:

Адекенов С.М. проф., академик (Қазақстан) (бас ред. орынбасары)
Величкин В.И. проф., корр.-мүшесі (Ресей)
Вольдемар Вуйчик проф. (Польша)
Гончарук В.В. проф., академик (Украина)
Гордиенко А.И. проф., академик (Белорус)
Дука Г. проф., академик (Молдова)
Илолов М.И. проф., академик (Тәжікстан),
Леска Богуслава проф. (Польша),
Локшин В.Н. проф. чл.-корр. (Қазақстан)
Нараев В.Н. проф. (Ресей)
Неклюдов И.М. проф., академик (Украина)
Нур Изура Удзир проф. (Малайзия)
Перни Стефано проф. (Ұлыбритания)
Потапов В.А. проф. (Украина)
Прокопович Полина проф. (Ұлыбритания)
Омбаев А.М. проф., корр.-мүшесі (Қазақстан)
Өтелбаев М.О. проф., академик (Қазақстан)
Садыбеков М.А. проф., корр.-мүшесі (Қазақстан)
Сатаев М.И. проф., корр.-мүшесі (Қазақстан)
Северский И.В. проф., академик (Қазақстан)
Сикорски Марек проф., (Польша)
Рамазанов Т.С. проф., академик (Қазақстан)
Такибаев Н.Ж. проф., академик (Қазақстан), бас ред. орынбасары
Харин С.Н. проф., академик (Қазақстан)
Чечин Л.М. проф., корр.-мүшесі (Қазақстан)
Харун Парлар проф. (Германия)
Энджун Гао проф. (Қытай)
Эркебаев А.Э. проф., академик (Қырғыстан)

«Қазақстан Республикасы Ұлттық ғылым академиясының баяндамалары»

ISSN 2518-1483 (Online),

ISSN 2224-5227 (Print)

Меншіктенуші: «Қазақстан Республикасының Ұлттық ғылым академиясы» Республикалық қоғамдық бірлестігі (Алматы қ.)
Қазақстан республикасының Мәдениет пен ақпарат министрлігінің Ақпарат және мұрағат комитетінде 01.06.2006 ж.
берілген №5540-Ж мерзімдік басылым тіркеуіне қойылу туралы куәлік

Мерзімділігі: жылына 6 рет.

Тиражы: 500 дана.

Редакцияның мекенжайы: 050010, Алматы қ., Шевченко көш., 28, 219 бөл., 220, тел.: 272-13-19, 272-13-18,
<http://reports-science.kz/index.php/en/archive>

© Қазақстан Республикасының Ұлттық ғылым академиясы, 2019

Типографияның мекенжайы: «Аруна» ЖК, Алматы қ., Муратбаева көш., 75.

Главный редактор
д.х.н., проф., академик НАН РК **М. Ж. Журинов**

Редакционная коллегия:

Адекенов С.М. проф., академик (Казахстан) (зам. гл. ред.)
Величкин В.И. проф., чл.-корр. (Россия)
Вольдемар Вуйчик проф. (Польша)
Гончарук В.В. проф., академик (Украина)
Гордиенко А.И. проф., академик (Беларусь)
Дука Г. проф., академик (Молдова)
Илолов М.И. проф., академик (Таджикистан),
Леска Богуслава проф. (Польша),
Локшин В.Н. проф. чл.-корр. (Казахстан)
Нараев В.Н. проф. (Россия)
Неклюдов И.М. проф., академик (Украина)
Нур Изура Удзир проф. (Малайзия)
Перни Стефано проф. (Великобритания)
Потапов В.А. проф. (Украина)
Прокопович Полина проф. (Великобритания)
Омбаев А.М. проф., чл.-корр. (Казахстан)
Отелбаев М.О. проф., академик (Казахстан)
Садыбеков М.А. проф., чл.-корр. (Казахстан)
Сатаев М.И. проф., чл.-корр. (Казахстан)
Северский И.В. проф., академик (Казахстан)
Сикорски Марек проф., (Польша)
Рамазанов Т.С. проф., академик (Казахстан)
Такибаев Н.Ж. проф., академик (Казахстан), зам. гл. ред.
Харин С.Н. проф., академик (Казахстан)
Чечин Л.М. проф., чл.-корр. (Казахстан)
Харун Парлар проф. (Германия)
Энджун Гао проф. (Китай)
Эркебаев А.Э. проф., академик (Кыргызстан)

Доклады Национальной академии наук Республики Казахстан»

ISSN 2518-1483 (Online),

ISSN 2224-5227 (Print)

Собственник: Республиканское общественное объединение «Национальная академия наук Республики Казахстан» (г. Алматы)

Свидетельство о постановке на учет периодического печатного издания в Комитете информации и архивов Министерства культуры и информации Республики Казахстан №5540-Ж, выданное 01.06.2006 г.

Периодичность: 6 раз в год.

Тираж: 500 экземпляров

Адрес редакции: 050010, г.Алматы, ул.Шевченко, 28, ком.218-220, тел. 272-13-19, 272-13-18

<http://reports-science.kz/index.php/en/archive>

©Национальная академия наук Республики Казахстан, 2019 г.

Адрес типографии: ИП «Аруна», г.Алматы, ул.Муратбаева, 75

E d i t o r i n c h i e f

doctor of chemistry, professor, academician of NAS RK **M.Zh. Zhurinov**

E d i t o r i a l b o a r d:

Adekenov S.M. prof., academician (Kazakhstan) (deputy editor in chief)

Velichkin V.I. prof., corr. member (Russia)

Voitsik Valdemar prof. (Poland)

Goncharuk V.V. prof., academician (Ukraine)

Gordiyenko A.I. prof., academician (Belarus)

Duka G. prof., academician (Moldova)

Ilolov M.I. prof., academician (Tadjikistan),

Leska Boguslava prof. (Poland),

Lokshin V.N. prof., corr. member. (Kazakhstan)

Narayev V.N. prof. (Russia)

Nekludov I.M. prof., academician (Ukraine)

Nur Izura Udzir prof. (Malaysia)

Perni Stephano prof. (Great Britain)

Potapov V.A. prof. (Ukraine)

Prokopovich Polina prof. (Great Britain)

Ombayev A.M. prof., corr. member. (Kazakhstan)

Otelbayv M.O. prof., academician (Kazakhstan)

Sadybekov M.A. prof., corr. member. (Kazakhstan)

Satayev M.I. prof., corr. member. (Kazakhstan)

Severskiy I.V. prof., academician (Kazakhstan)

Sikorski Marek prof., (Poland)

Ramazanov T.S. prof., academician (Kazakhstan)

Takibayev N.Zh. prof., academician (Kazakhstan), deputy editor in chief

Kharin S.N. prof., academician (Kazakhstan)

Chechin L.M. prof., corr. member. (Kazakhstan)

Kharun Parlar prof. (Germany)

Endzhun Gao prof. (China)

Erkebayev A.Ye. prof., academician (Kyrgyzstan)

Reports of the National Academy of Sciences of the Republic of Kazakhstan.

ISSN 2224-5227

ISSN 2518-1483 (Online),

ISSN 2224-5227 (Print)

Owner: RPA "National Academy of Sciences of the Republic of Kazakhstan" (Almaty)

The certificate of registration of a periodic printed publication in the Committee of Information and Archives of the Ministry of Culture and Information of the Republic of Kazakhstan N 5540-Ж, issued 01.06.2006

Periodicity: 6 times a year

Circulation: 500 copies

Editorial address: 28, Shevchenko str., of 219-220, Almaty, 050010, tel. 272-13-19, 272-13-18,

<http://reports-science.kz/index.php/en/archive>

© National Academy of Sciences of the Republic of Kazakhstan, 2019

Address of printing house: ST "Aruna", 75, Muratbayev str, Almaty

**REPORTS OF THE NATIONAL ACADEMY OF SCIENCES
OF THE REPUBLIC OF KAZAKHSTAN**

ISSN 2224-5227

<https://doi.org/10.32014/2019.2518-1483.186>

Volume 6, Number 328 (2019), 182 – 186

A.A. Kurmanalina, A.I. Omarova, A.M. Sapargali

^{1,3}Aktobe Regional State University K. Zhubanova;

²Caspian State University of Technology and Engineering named after S. Yesetov

kurmanalina@mail.ru, aizhan.omarova@yu.edu.kz, agles_@mail.ru

**ANALYSIS OF ECONOMIC ACTIVITY AS THE BASIS
FOR THE ADOPTION OF MANAGEMENT DECISIONS**

Abstract. Analysis of the economic activities of the organization is the basis for making management decisions in business. To justify management decisions, problems should be identified, production and financial risks should be assessed, possible consequences of the decisions made should be determined. As a general indicator of the financial and economic activity of the enterprise, the level of profitability is used, which is calculated as the ratio of net profit to the sum of fixed and circulating production assets.

Keywords: analysis, economic activity, enterprise economics, management decisions.

INTRODUCTION

Economic analysis (otherwise - the analysis of economic activity) plays an important role in improving the economic efficiency of organizations, in strengthening their financial condition. It is an economic science that studies the economics of organizations, their activities in terms of evaluating their work in fulfilling business plans, assessing their property and financial condition and in order to identify unused reserves for improving the efficiency of organizations.

The subject of economic analysis is the property-financial condition and current economic activities of organizations, studied in terms of its compliance with the objectives of business plans and in order to identify unused reserves to increase the efficiency of the organization.

MAINPART

The content of the economic analysis is a comprehensive and detailed study, based on all available sources of information, of various aspects of the functioning of this organization, aimed at improving its work by developing and implementing optimal management decisions that reflect the reserves identified during the analysis and the ways of using these reserves.

Economic analysis is divided into internal and external depending on the subjects of analysis, that is, from those bodies that conduct it. The most complete and comprehensive is the internal analysis conducted by the functional departments and services of this organization. External analysis conducted by tax authorities, banks, debtors and creditors and other organizations, as a rule, is limited to establishing the degree of stability of the financial condition of the analyzed organization, its solvency and liquidity both at the reporting dates and in the future.

A comprehensive economic analysis of the economic activity of the enterprise with the wide involvement of all employees, identification of unused internal production reserves on this basis, the selection of optimal management decisions, and the improvement of the scientific feasibility of plans will contribute to further growth in production efficiency and quality of work. When conducting a system analysis, as a rule, 6 stages are distinguished.

Consider the content of these stages in relation to the economic analysis of the economic activity of the enterprise. The balance sheet, statement of financial performance and the additional data listed above can serve as a solid information basis for the economic analysis of the economic activities of enterprises and other commercial structures. On their basis, one can judge the fulfillment of obligations, first of all, to shareholders, investors, buyers, as well as possible financial difficulties, sometimes leading to a pre-infarction financial condition. The economic analysis of economic activity in a market economy is

increasingly acquiring the character of a system analysis. When conducting a system analysis, six stages are usually distinguished. Consider the content of these stages in relation to the economic analysis of the economic activity of the enterprise. Using the analysis of the organization's economic activities, the general trends of the enterprise's development are studied, the reasons for the change in the results of activities are investigated, the development plans of the enterprise are developed and approved and management decisions are made, the implementation of the approved plans and decisions are monitored, reserves are identified to improve production efficiency, the results of operations are evaluated firms, an economic strategy is being developed for its development.

Analysis of the economic activities of the organization is the basis for making management decisions in business. To justify management decisions, problems should be identified, production and financial risks should be assessed, and possible consequences of decisions made should be determined.

In practice, performance indicators are profitability, profitability.

There are also individual indicators that characterize the effectiveness of individual aspects of the enterprise.

These indicators include:

- the efficiency of use of production resources that are available to the organization, namely:
 - the effectiveness of fixed assets (used indicators such as capital productivity, capital intensity);
 - the effectiveness of labor resources (indicators such as profitability of personnel, labor productivity are used);
 - the effectiveness of material resources (such indicators as material output, material consumption, profit per one ruble of material costs are used);
- the effectiveness of the investment activity of the organization (such an indicator as the payback period of capital investments is used, profit per one ruble of capital investments);
- the efficiency of use of the organization's assets (indicators such as turnover of current assets, profit per ruble of the value of assets, including current and non-current assets, etc. are used);
- capital efficiency (used by indicators such as net income per share, dividends per share, etc.)

Profitability characterizes the profit that the company receives from each ruble of money invested in the formation of the assets of the company.

The change in profitability reflects the dynamics of the effectiveness of all aspects of the enterprise. For example, an increase in the level of profitability indicates an increase in the effectiveness of the organization's activities,

The actually achieved performance indicators are compared with planned indicators, with data for previous reporting periods, as well as with indicators of other organizations.

When developing plans, proceed from the fact that the development of market relations and. new management methods necessitates the use of a systematic approach to organizing the economic analysis of the economic activity of the enterprise. The level and effectiveness of planned work to a decisive degree depends on the efficiency of the employees of the economic service of the enterprise. The leading link in this service is the planning and economic department, which is called upon to deal with economic planning, statistical accounting and analysis of the economic activity of the enterprise. The employees of this department must have high professional qualifications, have a sense of new, have a good knowledge of production technology. Of great importance was the introduction of the post of chief economist, who coordinates the work of the planning and economic department, the labor and wage department, the financial department, research groups and economic services in the shops and departments of enterprises. Features of the analysis are determined by the tasks of the body that analyzes the enterprise, they are manifested in the sequence of studying the economy, in the subject of analysis (the issues that the organization is interested in are analyzed), in the forms of analytical work. The information support of the analysis is, as a rule, the consolidated reporting of the main business link, the economic indicators of the economic activity of the enterprise as a whole, without detailing by units.

Analysis of the economic activity of the enterprise is based on the use of a wide range of planned, accounting, statistical and non-accounting information, as well as on the actual data of various statements. The information used for analysis is that it is multilateral information characterizing the economic side of the production and economic activity of an enterprise or other production unit. An important type of work involves quality training in the materials extracted for analysis, depending on its goals.

When developing plans, proceed from the fact that the development of market relations and new management methods necessitates the use of a systematic approach to organizing the economic analysis of the economic activity of the enterprise. The level and effectiveness of planned work to a decisive degree depends on the efficiency of the employees of the economic service of the enterprise. The leading link in this service is the planning and economic department, which is called upon to deal with economic planning, statistical accounting and analysis of the economic activity of the enterprise. The employees of this department must have high professional qualifications, have a sense of new, have a good knowledge of production technology. Of great importance was the introduction of the post of chief economist, who coordinates the work of the planning and economic department, the labor and wage department, the financial department, research groups and economic services in the shops and departments of enterprises.

Features of the analysis are determined by the tasks of the body that analyzes the enterprise, they are manifested in the sequence of studying the economy, in the subject of analysis (the issues that the organization is interested in are analyzed), in the forms of analytical work. The information support of the analysis is, as a rule, the consolidated reporting of the main business link, the economic indicators of the economic activity of the enterprise as a whole, without detailing by units. Analysis of the economic activity of the enterprise is based on the use of a wide range of planned, accounting, statistical and extra-accounting information, as well as on the actual data of various statements. The information used for analysis is that it is multilateral information characterizing the economic side of the production and economic activity of an enterprise or other production unit. An important task work includes quality training in materials used for analysis, depending on its goals.

The effectiveness of the organization is influenced by a large number of factors of different levels. These factors are:

- general economic factors. These include: trends and patterns of economic development, the achievement of scientific and technological progress, tax, investment, depreciation policies of the state, etc.
- natural and geographical factors: the location of the organization, climatic features of the area, etc.
- Regional factors: economic potential of a given region, investment policy in this region, etc.
- industry factors: the place of the industry in the national economic complex, market conditions in this industry, etc.
- factors caused by the functioning of the analyzed organization - the degree of use of production resources, compliance with the savings regime in the costs of production and sale of products, rationality of the organization of supply and marketing activities, investment and pricing policies, the most complete identification and use of on-farm reserves, etc.

It is impossible to control what cannot be reliably estimated; this is a well-known fact. And it only confirms the relevance of the investigated problem - the problem of evaluating the effectiveness of the company. Efficiency, as an indicator that determines the accuracy of the chosen direction when striving for the final result, should have quantitative and qualitative certainty. This article will focus directly on the quantitative aspect, which at this stage of the development of economic thought is more deterministic than qualitative. In this paper, we consider the five most formalized approaches, and on their basis a number of key indicators are derived that allow you to get the most complete picture of the financial and economic condition of an economic entity when it is examined for operational efficiency.

The first approach is economic. When using this approach, the greatest importance is assigned to the effectiveness of resource management. Most often, the economic approach is used to determine the current effectiveness of the organization's core business. Efficiency is considered here as cost-effectiveness and physical performance - a definition proposed by costly and potential approaches. The most widely used valuation method for this approach is to determine profitability.

The second approach takes as a basis the comparison of costs with the effect of cash flows. The financial approach has always been used to assess the effectiveness of investment. Subsequently, the methods proposed by him were also applied to the assessment of business activities in general.

The third approach is based on the creation of a company's market value, reflecting the strategic goals of management, namely, meeting the needs of all interested parties and maintaining a balance of interests. The company's market value is used as a comprehensive indicator, and the primary profitability here is only one of the factors influencing the value of a business.

The fourth approach - the process one - is built on enhancing cooperation between the subjects of management, and intensifying relations between them. The processes taking place in the organization ensure the existence of the types of activities of the company, which in turn form indicators. And it turns out that if you improve the quality of the processes, then the final result will improve as a result.

The fifth approach is a complex of all of the above approaches. He recognizes the entire proposed range of indicators - financial, cost and non-financial - linking them and bringing them into a single system. The beginning of this approach in economic thought in the beginning of the 1990s was laid by the famous American scientists Norton and Kaplan with their concept of a balanced scorecard, which implies the organization of such a strategic planning system that would allow us to direct all the company's activities to the implementation of strategic plans and decisions by solving everyday tasks. In this concept, special attention is paid to the responsibility of each individual link - unit, department, employee. For this, it is necessary to establish clearly defined strategic numerical indicators - KPI (key performance indicators). The advantage of the BSC is that it allows the company management to get a complete picture of the business, to avoid critical situations, and also to simplify the system of interaction between different organizational levels in the company.

Type of economic analysis	When should the specific type of analysis be chosen?
<i>Cost-minimization analysis</i> ↓	1. When the compared technologies are equally effective - then it is only necessary to collect data about costs
<i>Cost-effectiveness analysis</i> ↓	1. When the effectiveness of the compared technologies are different - i.e. the difference in costs have to be weighted against the difference in effectiveness 2. When a technology dominates the other technologies* - i.e. is more effective and cheaper than the compared technology 3. When activities with the same aim and measure of effectiveness are compared
<i>Cost-utility analysis</i> ↓	1. When health-related quality of life is an important health outcome 2. When activities across specialties or departments in the health care sector have to be compared
<i>Cost-benefit analysis</i>	1. When non-health effects are also important - e.g. the treatment process itself, utility of information. 2. When only one technology is assessed (net-benefit) 3. When there is a wish that individual lives are valued in monetary units 4. When activities across society have to be compared

Figure 2 - chart of choice of type of economic analysis from publication

Economic analysis involves assessing or examining topics or issues from an economist's perspective. Economic analysis is the study of economic systems. It may also be a study of a production process or an industry. The analysis aims to determine how effectively the economy or something within it is operating.

CONCLUSION

Thus, based on a review of approaches to assessing the effectiveness of an organization, it can be concluded that in a well-structured system, evaluation indicators should express not only the quantitatively measurable result of the enterprise's activity, but also the way it was achieved. The basic principle of the formation of a system of indicators for assessing effectiveness is the ratio of the final result and its economic effect - direct profit with expended resources.

А.А. Курманалина, А.И. Омарова, А.М. Сапарғали

^{1,3}Ақтөбе өңірлік мемлекеттік университеті Қ.Жұбанова;

²Есетов атындағы Каспий мемлекеттік технологиялар және инжиниринг университеті

БАСҚАРУ ШЕШІМДЕРІН БАСҚАРУ НЕГІЗІНДЕГІ ЭКОНОМИКАЛЫҚ ҚЫЗМЕТ ТАЛДАУ

Аннотация. Ұйымның экономикалық қызметін талдау бизнесте басқару шешімдерін қабылдау үшін негіз болып табылады. Басқару шешімдерін негіздеу үшін проблемалар анықталуы керек, өндірістік және қаржылық тәуекелдер бағалануы керек, қабылданатын шешімдердің ықтимал салдары анықталуы керек.

Кәсіпорынның қаржылық-шаруашылық қызметінің жалпы көрсеткішіретінде таза пайданың тіркелген және айналымдағы өндірістік активтердің сомасына қатынасы ретінде есептелген кірістілік деңгейік олданылады.

Түйін сөздер: талдау, экономикалық қызмет, кәсіпорын экономикасы, басқару шешімдері.

А.А. Курманалина, А.И. Омарова, А.М. Сапарғали

^{1,3}Актюбинского регионального государственного университет а им. К. Жубанова;

²Каспийского государственного университета технологий и инжиниринга имени Ш. Есетова

АНАЛИЗ ХОЗЯЙСТВЕННОЙ ДЕЯТЕЛЬНОСТИ КАК ОСНОВА В ПРИНЯТИИ УПРАВЛЕНЧЕСКИХ РЕШЕНИЙ

Аннотация. Анализ хозяйственной деятельности организации является основой для принятия управленческих решений в бизнесе. Для обоснования управленческих решений следует выявлять проблемы, оценивать производственные и финансовые риски, определять возможные последствия принимаемых решений. В качестве обобщающего показателя эффективности финансово-хозяйственной деятельности предприятия применяется уровень рентабельности, который рассчитывается как отношение чистой прибыли к сумме основных и оборотных производственных средств.

Ключевые слова: анализ, хозяйственная деятельность, экономика предприятия, управленческие решения.

Information about the author:

Kurmanalina A.A. – PhD, senior lecturer, Aktobe Regional State University K. Zhubanova, kurmanalina@mail.ru, <https://orcid.org/0000-0002-0012-2775>

Omarova A.I. – PhD, Caspian State University of Technology and Engineering named after S. Yesetov, aizhan.omarova@yu.edu.kz, <https://orcid.org/0000-0003-2045-3683>

Sapargali A.M. - master of Economics, teacher of Aktobe Regional State University K. Zhubanova, agles@mail.ru, <https://orcid.org/0000-0002-0729-6401>

REFERENCES

- [1] Emerson, G. The Twelve Principles of Productivity: Per. with eng. / G. Emerson. M.: Economics, 1992.
- [2] Bolodurina M. P. The system of indicators for assessing the effectiveness of enterprises in the oil and gas holding // Economic analysis: theory and practice. 2014. № 35. S. 48–59.
- [3] Nikolaevskaya O. A. Cost-based assessment of the effectiveness of company management: Monograph / O. A. Nikolaevskaya. M.: BIBLIO-GLOBUS Publishing House, 2013. 256 p.
- [4] Zhansagimova A.E., Niyazbekova Sh.U. Model of organizational structure of tourist cluster in Kazakhstan. National Academy Of Management. Scientific economic journal №11(149) 2013. ISSN 1993-6788, Актуальні проблеми економіки (Україна). Scopus.332-337 c
- [5] Zhansagimova A.E., Dogaov A.N., Otemaratovna T.B., Doshan A.S. Innovation, investing, economics and tourism. Life Science Journal. Innovation, investing, economics and tourism. (ISSN:1097-8135); №11(11s), 2014C. 550-555.
- [6] Sayabaev K.M., Zhansagimova A.E. Finance, franchise and their impact on tourism. Journal of internet banking and commerce. (<http://www.icommercecetral.com>), december 2016, vol. 21, no. 3

**Publication Ethics and Publication Malpractice
in the journals of the National Academy of Sciences of the Republic of Kazakhstan**

For information on Ethics in publishing and Ethical guidelines for journal publication see <http://www.elsevier.com/publishingethics> and <http://www.elsevier.com/journal-authors/ethics>.

Submission of an article to the National Academy of Sciences of the Republic of Kazakhstan implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see <http://www.elsevier.com/postingpolicy>), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. In particular, translations into English of papers already published in another language are not accepted.

No other forms of scientific misconduct are allowed, such as plagiarism, falsification, fraudulent data, incorrect interpretation of other works, incorrect citations, etc. The National Academy of Sciences of the Republic of Kazakhstan follows the Code of Conduct of the Committee on Publication Ethics (COPE), and follows the COPE Flowcharts for Resolving Cases of Suspected Misconduct (http://publicationethics.org/files/u2/New_Code.pdf). To verify originality, your article may be checked by the originality detection service Cross Check <http://www.elsevier.com/editors/plagdetect>.

The authors are obliged to participate in peer review process and be ready to provide corrections, clarifications, retractions and apologies when needed. All authors of a paper should have significantly contributed to the research.

The reviewers should provide objective judgments and should point out relevant published works which are not yet cited. Reviewed articles should be treated confidentially. The reviewers will be chosen in such a way that there is no conflict of interests with respect to the research, the authors and/or the research funders.

The editors have complete responsibility and authority to reject or accept a paper, and they will only accept a paper when reasonably certain. They will preserve anonymity of reviewers and promote publication of corrections, clarifications, retractions and apologies when needed. The acceptance of a paper automatically implies the copyright transfer to the National Academy of sciences of the Republic of Kazakhstan.

The Editorial Board of the National Academy of sciences of the Republic of Kazakhstan will monitor and safeguard publishing ethics.

Правила оформления статьи для публикации в журнале смотреть на сайте:

www:nauka-nanrk.kz

ISSN 2518-1483 (Online), ISSN 2224-5227 (Print)

<http://reports-science.kz/index.php/en/archive>

Редакторы *М. С. Ахметова, Т.А. Апендиев, Д.С. Аленов*
Верстка на компьютере *А.М. Кульгинбаевой*

Подписано в печать 12.12.2019.
Формат 60x88¹/₈. Бумага офсетная. Печать – ризограф.
15,3 п.л. Тираж 500. Заказ 6.