2019 • 1

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

Бас редакторы х.ғ.д., проф., ҚР ҰҒА академигі **М.Ж. Жұрынов**

Редакция алқасы:

Адекенов С.М. проф., академик (Қазақстан) (бас ред. орынбасары)

Величкин В.И. проф., корр.-мүшесі (Ресей)

Вольдемар Вуйцик 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 к., 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.

ДОКЛАДЫНАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК РЕСПУБЛИКИ КАЗАХСТАН

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 Вуйцик 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

REPORTS 2019 • 1

OF NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN

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

Editorial board:

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)

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

Severskyi 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 Volume 1, Number 323 (2019), 86 – 89 https://doi.org/10.32014/2019.2518-1483.12

UDC 338.001.36

M.S. Dariskalieva¹, D.O. Ahmurzina², A.Sh. Nurzhanova, Zh.R. Abuziarova

Atyrau State University named after H. Dosmukhamedov Aiko-er@mail.ru, Zhanna81@mail.ru, janar baxa@mail.ru

INNOVATIVE DEVELOPMENT OF SMALL BUSINESS AS A FACTOR OF SUSTAINABLE DEVELOPMENT OF THE KAZAKHSTAN ECONOMY

Abstract. Traditionally, small business is not only a catalyst for economic growth in the economy, but also a guarantor of its stability in solving employment issues, optimizing the industrial sector, the quality of science and innovations, etc. In this connection, the authors of the article consider the innovative development of entrepreneurship as a factor for the sustainable development of the economy of Kazakhstan. The process of innovation development can effectively proceed only in certain conditions created by the innovation environment. Innovation environment is a prerequisite for the formation of an effective innovation system. The development of the country in the future should become innovative, the spatial configuration should become more flexible, not tied to the existing energy source base and centers of concentration of financial flows. Small businesses are most suitable for individual psychological characteristics of a person, they are simpler and more transparent, and therefore accessible to a wide range of citizens.

Keywords: small business, entrepreneurship, innovations, programs, support, competitiveness.

INTRODUCTION

Entrepreneurship should be viewed as a manifestation of initiative, economic activity in conditions of constant risk, as a function of a special kind, associated primarily with the systematic receipt of income and profit from a particular activity. As A. Popov notes, by its nature, entrepreneurship has a dual basis. On the one hand, it acts as a type of labor activity, on the other - as a special type of behavior of an economic entity.

The essence of entrepreneurship as a type of activity is manifested through entrepreneurial initiative, innovation and creative search, constant economic risk, economic interest in the results of work, responsibility for the results of labor. "Historically, the development of the productive forces of any society, as a rule, began with a small production. It is not by chance that in the Western theory, the main features and principles of entrepreneurship are often considered on the example of small ones, in particular, within the framework of the Gründurgsforschung, New venture theory, which provides a sharp increase in new companies in a favorable economic environment. It should be noted that in the Gunder's theory, the creation of a new enterprise and a set of related questions are interpreted on the basis of the initial small business. From this we can conclude that entrepreneurship as a type of activity usually starts from a small size and already in the process of carrying out its economic activity, further transformation into a medium or large business takes place, or it remains small' [1].

MAIN PART

Consider the essence of the concept of "innovative development". The most fully reveals the essence of innovation development as "a special innovation focus of goals, ways to achieve them, a special innovation" setting "the mechanism of state influence on the economy and market self-organization, due to the preferential orientation of links in all spheres of the economy to the integrated use of innovations in the production of goods and services, redistribution of forms and regulatory methods for impact impact "To reveal the essence of the socio-economic process" innovation On-line development "it is necessary to

ISSN 2224-5227

identify a number of principles of its organization, reflecting the conditions necessary for its implementation (such as the presence of the innovation environment and the innovation system); defining the importance of the human factor in the innovation process (the innovative susceptibility of the individual and society, the motivational mechanisms for the development of innovative thinking).

Small business in its essence is not an organizational-legal form of management, that is, only because it is such. The subjects of small business of various organizational and legal forms may be small, and the concept of "small" at best can provide certain features for individual forms. For example, the specific nature of the peasant (farmer) economy does not follow from the size, but from the nature, of the principles of organization of this form of management. Small business as a component of entrepreneurship in general characterizes the size, parameters of this phenomenon in relation to a specific subject. Since we are talking about small forms, this means that the dimensions of the lower, minimum possible to a certain level are fixed [2].

This definition will help to protect innovations from processes that do not give the desired effect, and can be applied to any improvements and new developments in the production and organizational areas of the enterprise [2].

Category	Stage	Content	Properties
Innovation	Introductory	Patent, invention, discovery, new methodology, etc.	Availability of novelty
Innovation	Intermediate	Introduction of innovation, its use	The need and materialization of novelty
Innovation	Final	Dissemination of innovation	Diffusion of novelty, obtaining the necessary effect

Table 1 - The main content and properties of innovations, innovations and innovations

Innovative activity begins on the basis of research, development and (or) design works, which create a reserve for the innovation cycle. As a result of these works there is an innovation that becomes an innovation in the form of a method, product or service. Such a complex nature of innovation, a variety of applications, methods of use and its versatility require the classification of innovations necessary to identify the type of innovation and the degree of its impact on the effectiveness of production. Consider the existing classification of innovations of domestic and foreign scientists.

Forming effective innovation mechanisms in the economy of Kazakhstan using the potential of small business is a pressing problem and the fact that the accumulated experience of industrialized and post-industrial countries focused on the development of market economy relations certainly shows that small business is a necessary condition for achieving economic success and is the main engine of innovation development [3].

All structures are interested in the development of such a sector of the economy, since small business is the basis on which the entire economic pyramid will be created, which can provide jobs for a significant part of the population and form the middle class of society. From this it follows that the faster a significant stratum of small business entities is created within the state, the more actively the model of an effective market economy will develop, including the implementation of the tasks of economic restructuring and transition to a new level of technological structure.

The process of commercialization of innovation is a problem for small enterprises, and at the same time is a very important stage in the innovation activity of small enterprises (hereinafter referred to as MP).

Thus, reimbursement of the costs of the founder (developer) of the innovative product and further profit from his idea is carried out. Innovation activity is an activity aimed at finding new ideas and their further commercialization in order to increase the range and quality of products, modernize technologies and organize production [4]

Innovation activity contains the identified problems of enterprises, the introduction of the innovation process, as well as its organization. The advantage of the innovation activity of enterprises is that all the

developed ideas are gradually aging. It follows from this that innovations include changes in the economy, industry and behavior of people, and therefore they should be oriented to the market, meeting its needs. But, despite all the features of innovation, the problem of innovation in small business remains open today [5].

The process of innovation development can effectively proceed only in certain conditions created by the innovation environment. Innovation environment is a prerequisite for the formation of an effective innovation system. Therefore, it is necessary to consider in more detail the essence of this category.

To provide the necessary support for innovation processes, it is necessary to create an appropriate infrastructure that would implement financial, information, consulting, marketing and other types of support for innovation projects. The combination of scientific and technological clusters and innovation infrastructure creates conditions for the development of the territory in which they are located.

So, the main advantages of a regional cluster include [6]:

- 1. The presence of a sustainable system of dissemination of new knowledge (technological network).
- 2. Additional competitive advantages of cluster enterprises due to their internal specialization within the cluster economy.
- 3. An important feature of innovation-industrial clusters is the presence in their structure of flexible entrepreneurial structures that form the innovative potential.
- 4. Regional industrial clusters are extremely important for the development of small business, which facilitates access to ideas, the market and capital.

To date, a unified theoretical position in the formation and development of comprehensive measures for the development of innovative entrepreneurship has not yet been formed, which implies the expedient continuation of research in this direction.

Thus, the effectiveness of the innovation development of the economy depends not only on how effective the activity of independent economic agents (firms, scientific organizations, universities, etc.) are individually, but also on how "they interact with each other as elements of a collective system creating and using knowledge, as well as with public institutions (such as values, norms, law)".

In foreign countries, including European, small business is considered as the most important type of business, based on a direct search for innovations and opportunities for the production of goods and services based on scientific research. According to American scientists J. Kay and S. Davis, small business should be considered as a special type of activity that contains the basic mandatory conditions and requirements [7]. Consequently, the founder of the innovation idea initiates the connection of resources, capital and labor with one process of producing a product or service, and also solves the problem of making important decisions in the process of productive productivity, which will later determine the direction of innovation in small business. They also believe that the initiator of the project is an entrepreneur who seeks to introduce innovative technologies based on both commercial and product services, with the introduction of new forms of organization of activities that have no analogues, in which the project initiator participates a certain risk.

CONCLUSION

In addition to the above, it is worth agreeing also with P. Drucker, who puts forward two entrepreneurial functions that, in our opinion, emphasize the special features of entrepreneurship: it is about marketing and innovation [8]. The scientist claims that a business is different from all human organizations in that it provides for the sale of goods and services, that is, any organization that uses marketing when developing or selling a product can be called a business. The second function of business is innovation, that is, the provision of better and cheaper goods and services (it is not enough just to produce cheap goods and services, the business must provide better and cheaper ones).

Thus, it can be said that the spread of innovation in the economy is a direct goal and function of entrepreneurship. The problem of successful development and implementation of innovative projects in the context of economic reforms is of fundamental importance. Unfortunately, in modern conditions the innovative potential of small business is underused. The development potential in this area has not yet been exhausted. In the countries of the world, the ranking in terms of innovation of small and medium businesses and the results remain unchanged, Switzerland remains the leader. He is followed by the United Kingdom, Sweden, Finland, the Netherlands, the United States of America, Singapore, Denmark, Luxembourg and Hong Kong.

ISSN 2224–5227

УДК 338.001.36

М.С. Дарискалиева, Д.О. Ахмурзина, А.Ш. Нуржанова, Ж.Р. Абузьярова

Х. Досмұхамедов атындағы Атырау мемлекеттік университеті

ҚАЗАҚСТАННЫҢ ЭКОНОМИКАСЫНЫҢ ТҰРАҚТЫ ДАМУЫ ФАКТІЛЕРІНІҢ ШАҒЫН БИЗНЕСІНІҢ ИННОВАЦИЯЛЫҚ ДАМЫТУЫ

Аннотация. Дәстүрлі түрде шағын бизнес экономикадағы экономикалық өсудің катализаторы ғана емес, сонымен қатар жұмыспен қамту мәселелерін шешудегі тұрақтылықтың кепілі, өнеркәсіп секторын оңтайландыру, ғылым мен инновациялар сапасы және т.б. Осыған байланысты, мақаланың авторлары Қазақстанның экономикасын тұрақты дамыту факторы ретінде кәсіпкерліктің инновациялық дамуын қарастырады. Инновациялық даму үдерісі инновациялық ортаны құрған белгілі бір жағдайларда ғана тиімді түрде жұмыс істей алады. Инновациялық орта тиімді инновациялық жүйені қалыптастырудың алғышарты болып табылады. Болашақта елдің дамуы инновациялық болуға тиіс, кеңістіктік конфигурация қолданыстағы энергия көзі базасына және қаржы ағындарының шоғырлану орталықтарына емес, икемді болуы керек. Кішігірім кәсіпорындар жеке адамның жеке психологиялық сипаттамаларына сәйкес келеді, олар қарапайым және ашық, сондықтан азаматтардың кең ауқымы үшін қол жетімді.

Түйін сөздер: шағын бизнес, кәсіпкерлік, инновациялар, бағдарламалар, қолдау, бәсекеге қабілеттілік

УДК 338.001.36

М.С. Дарискалиева, Д.О. Ахмурзина, А.Ш. Нуржанова, Ж.Р. Абузьярова

Атырауский государственный университет им. Х. Досмухамедова

ИННОВАЦИОННОЕ РАЗВИТИЕ МАЛОГО БИЗНЕСА КАК ФАКТОРА УСТОЙЧИВОГО РАЗВИТИЯ ЭКОНОМИКИ КАЗАХСТАНА

Аннотация. Традиционно малый бизнес является не только катализатором экономического роста в экономике, но и гарантом его стабильности в решении вопросов занятости, оптимизации промышленного сектора, качества науки и инноваций и т.д. В связи с чем, авторы статьи рассматривают инновационное развитие предпринимательства как фактор устойчивого развития экономики Казахстана. Процесс иннова-ционного развития может эффективно протекать только в определенных условиях, созданных иннова-ционной средой. Инновационная среда является предпосылкой формирования действенной инновационной системы. Развитие страны в перспективе должно приобрести инновационный характер, пространственная конфигурация должна стать более гибкой, не привязанной к сложившейся энергосырьевой базе и центрам концентрации финансовых потоков. Малые предприятия наиболее подходят для индивидуальных психоло-гических характеристик человека, они более просты и прозрачны, и поэтому доступны широкому кругу граждан.

Ключевые слова: малый бизнес, предпринимательство, инновации, программы, поддержка, конкурентоспособность.

Information about authors:

Dariskalieva M.S. - Atyrau State University named after H. Dosmukhamedov, https://orcid.org/0000-0002-4697-3188; Ahmurzina D.O. - Atyrau State University named after H. Dosmukhamedov, https://orcid.org/0000-0001-8616-9939; Nurzhanova A.Sh. - Atyrau State University named after H. Dosmukhamedov, https://orcid.org/0000-0002-0871-0029; Abuziarova Zh.R. - Atyrau State University named after H. Dosmukhamedov

REFERENCES

- [1] Kusainov N. Competitive advantages of Kazakhstan in the context of integration into the global economy // Kazakhstan in the global economic processes: Proceedings of the international conference. Almaty: Dayk-Press, 2015. p. 63.
 - [2] Golub A., Chebotaryov A. Model of the efficiency of financing innovation // Questions of economy. 2016. № 3. P. 104–107.
- [3] Nurpeisova A.A., Dyusembaeva L.K., Kurmanova D.S. DEVELOPMENT OF MATHEMATICAL MODELS OPTIMIZING THE PROCESS OF CREATING INNOVATION PRODUCTION.
- [4] Bogdanova E.L. Some aspects of sustainable innovative development of an enterprise [Text] / E.L. Bogdanova, A.B. Titov // Bulletin of the Samara State University of Economics. Samara, 2014. № 11 (121). pp. 95-98.
 - [5] Vinokurov V. I. Basic terms and definitions in the sphere of innovations // Innovations. 2015. № 4. p. 34.
- [6] Sabirov R.K., Kurmasheva S.O. Profiles of the regional development of the agrarian sector. Proceedings of the National Academy of Sciences of the Republic of Kazakhstan. ISSN 2224-526X, a series of agricultural sciences. No. 1 2018, p.52-56 site address http://agricultural.kz/index.php/en/arhiv. https://doi.org/10.32014/2018. 2224-526X
- [7] Barlybaeva N.A. National Innovation System of Kazakhstan: Theory, Methodology, Development Mechanism: Dis ... Dr. Econ. Sciences: 08.00.05. Almaty, **2017**. p. 199.
- [8] Baimuratov U. Investments and Innovations: Nonlinear Synthesis // Vol. 3. Selected Scientific Works. Almaty: BIS, 2015. 320 p.
- [9] Zhansagimov A.E. Entrepreneurship in the field of tourism. News of NAS RK. Series of social sciences and humanities No. 5, **2016**. Pp. 208-214.. http://soc-human.kz/index.php/en/arhiv. https://doi.org/10.32014/2018.2224-5294.

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 07.02.2019. Формат 60х881/8. Бумага офсетная. Печать – ризограф. 10,5 п.л. Тираж 500. Заказ 1.