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NAS RK is pleased to announce that Bulletin of NAS RK scientific journal has been accepted for indexing in the Emerging Sources Citation Index, a new edition of Web of Science. Content in this index is under consideration by Clarivate Analytics to be accepted in the Science Citation Index Expanded, the Social Sciences Citation Index, and the Arts & Humanities Citation Index. The quality and depth of content Web of Science offers to researchers, authors, publishers, and institutions sets it apart from other research databases. The inclusion of Bulletin of NAS RK in the Emerging Sources Citation Index demonstrates our dedication to providing the most relevant and influential multidiscipline content to our community.

Қазақстан Республикасы Ұлттық ғылым академиясы "ҚР ҰҒА Хабаршысы" ғылыми журналының Web of Science-тің жаңаланған нұсқасы Emerging Sources Citation Index-те индекстелуге қабылданғанын хабарлайды. Бұл индекстелу барысында Clarivate Analytics компаниясы журналды одан әрі the Science Citation Index Expanded, the Social Sciences Citation Index және the Arts & Humanities Citation Index-ке қабылдау мәселесін қарастыруда. Web of Science зерттеушілер, авторлар, баспашылар мен мекемелерге контент тереңдігі мен сапасын ұсынады. ҚР ҰҒА Хабаршысының Emerging Sources Citation Index-ке енуі біздің қоғамдастық үшін ең өзекті және беделді мультидисциплинарлы контентке адалдығымызды білдіреді.

НАН РК сообщает, что научный журнал «Вестник НАН РК» был принят для индексирования в Emerging Sources Citation Index, обновленной версии Web of Science. Содержание в этом индексировании находится в стадии рассмотрения компанией Clarivate Analytics для дальнейшего принятия журнала в the Science Citation Index Expanded, the Social Sciences Citation Index и the Arts & Humanities Citation Index. Web of Science предлагает качество и глубину контента для исследователей, авторов, издателей и учреждений. Включение Вестника НАН РК в Emerging Sources Citation Index демонстрирует нашу приверженность к наиболее актуальному и влиятельному мультидисциплинарному контенту для нашего сообщества.

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METHODOLOGY FOR EVALUATING THE EFFECTIVENESS OF INVESTMENTS IN THE EXPANSION OF UNIVERSITY HOUSING INFRASTRUCTURE

Abstract. The article deals with the problem of assessing the socio-economic efficiency of investment in the expansion of University housing infrastructure. Evaluating the effectiveness of investment design solutions is the main approach to determining the return on investment of financial resources in expanding the Fund of student dormitories, in which both investors and all participants in the implementation of investment projects for the construction and modernization of student dormitories are interested. To determine the socio-economic efficiency of the investment project for the construction of housing infrastructure of higher education institutions, a system of indicators was formed. Methods for calculating the socio-economic efficiency of housing infrastructure investment projects based on qualitative and quantitative criteria are considered. A step-by-step implementation of methods for assessing the socio-economic efficiency of projects for the modernization of student housing stock is presented. Since all regions of Kazakhstan set the task of expanding the University's housing infrastructure through the construction of new and reconstruction of existing dormitories with the use of public-private partnerships, there is a need to expand student housing Fund, which is based on the data of the operator of the state program of JSC "Financial center" of the MES RK, which determines the need, funding sources, manage cash flow to ensure the introduction of new places in hostels for students, undergraduates and doctoral students, draws up contracts with investors.

Key words: investment project, housing sector; University housing infrastructure, student housing stock, student dormitories, project performance indicators; profit; discounted income; project payback period.

Introduction. The housing sector is an entire industrial sector that accumulates the expansion of the housing stock through the construction of new buildings and reconstruction of existing housing facilities. An important part of the housing sector is the design and calculation of estimated documentation for investment projects. The structure of the housing sector also includes housing and communal services, which ensure the smooth functioning of housing facilities. Each object of the housing sector is a housing infrastructure.

University housing infrastructure includes housing facilities (employee homes, student dormitories, hotels, etc.), as well as housing and communal services. Among them, student dormitories are the most important infrastructure of the University, as they have a socio-economic impact on the level of education.

In the address to the people of Kazakhstan "Five social initiatives" in March 2018, Elbasy N. Nazarbayev outlined the construction of student dormitories up to 75 thousand places by the end of 2022 in order to "achieve the education system in accordance with international standards" by "improving the conditions of study and residence of students" [1]. In this regard, the expansion of the Fund of student dormitories in Kazakhstan is updated at the state level. Today, programs have been adopted and a forecast has been made for the construction of new and modernization of existing facilities for the residence of University students.

To finance the expansion of university housing infrastructure, investors are primarily interested in the cost-effectiveness of the design solution. Scientific research related to the social and economic assessment of the construction and modernization of student dormitories is practically absent today.

The practice of financing infrastructure projects is studied quite a lot by scientists and economists. Among the first research scientists, we can distinguish the works of representatives of the Keynesian and neo-Keynesian schools: P. Rosenstein Rodan, W. Rostow, A. Hirschman, and others [2-4]. In Kazakhstan, the issues of investment in infrastructure projects in recent years have been studied quite a lot by scientists-economists M. Kuttybai, N. Davletbayeva, Y. Orynassarova, A. Kamenova, U. Zh. Shalbolova, S. Yegemberdieva [5,6]. The works of Russian researchers A. M. Petrov, R. V. Savkina, A. A. Kuzmina, M. Polulekh, T. A. Belousova are also devoted to the assessment of the investment attractiveness of projects [7].

The issues of the economy of the housing sector, housing and communal infrastructure, investments in the expansion of the housing stock were investigated by the following scientists: V. Buzyrev, D. Friedman, N. Ordway, H. Braun, V. Chernyak. [8-11]. But student dormitories do not stand out as a separate object of research.

Since the article examines the economics of university infrastructure, general issues of this direction are considered in the works of Y.V. Podoprigora, E.V. Ufimtseva, A.N. Trotsenko, I.M. Romanova, A.M. Sagatdinova [12-15]. Certain aspects of the university social infrastructure are considered by Noble Akujobi, N. French, G. Bhat, G. Matharu, F.O. Guimarães, D. Solomon, C. R La Roche, M. A. Flanigan, Jr.P. K. Copeland., G. Robert [16-18]. They investigate the quality of services and the standard of living of students on campuses, the assessment of catering establishments on campuses, the quality of housing and communal services, investment issues, the social environment of students, student traditions in dormitories.

Student dormitories have been studied quite a lot in construction science and architecture in terms of their design and architectural planning solutions.

Kazakh scientists who have chosen student dormitories as the object of research also mainly study the technical aspects. But from the point of view of economic science with the object of research of University housing infrastructure, the results in the Kazakh scientific space are still isolated. In Kazakhstan, there are separate scientific studies on the housing market, the housing and utilities economy, and the development of urban infrastructure, but they do not consider the economic relations that arise in the process of investment, design, construction, modernization of student dormitories and their communal and service maintenance.

Government programs in Kazakhstan aimed at increasing the number of student dormitories require questions about their financing. In order to attract investors to the construction and modernization of student dormitories, comprehensive research-based methods of socio-economic assessment of the expansion of University housing infrastructure (student dormitories) will become a guide to the justification of the choice of a particular design solution.

Main part. Economic assessment of investment projects of housing infrastructure is a rather complex process and is carried out using various methods. The effectiveness of design decisions and projects should be determined from the perspective of the resulting effect for various categories of users: society, the state, homeowners and residents at both the macroeconomic and microeconomic levels.

Currently, Kazakhstan is working to expand investment in the modernization of housing infrastructure through various mechanisms using modern economic tools. Each mechanism has obvious advantages and disadvantages, and different implementation conditions. The most affordable mechanism for financing the modernization of the student housing Fund is a state program using budget and private investment. The implementation of this program is being worked out in detail based on the experience of state programs for providing housing to young families. The operator of the state program is JSC "Financial center" of the Ministry of education and science of the Republic of Kazakhstan, which is responsible for its rationalization.

Starting with the implementation of the program for the construction of student dormitories, 4,500 students were able to live comfortably during their studies. Every year, the number of grants for higher education increases, which means that the need for places in student dormitories is growing. It is planned to provide places in dormitories not only for grant students, but for those students who study on a paid basis and need affordable temporary housing.

The structure of the need for places in student dormitories today has the following distribution: Almaty – 36%, Nur-Sultan – 20%, Shymkent – 9%, in Turkestan and East Kazakhstan regions-4%,

Pavlodar – 3%, Akmola – 3%, Aktobe – 3%, Kostanay – 3%, and North Kazakhstan – 3%, Karaganda, Atyrau, Almaty and West Kazakhstan regions – 2%, Kyzylorda and Mangystau regions- 1% [19].

Expansion of the Fund of University housing infrastructure for students, undergraduates and doctoral students is a guarantee of improving the level of education through the growth of the social side of life of young Kazakhstanis.

Today, the priority investment tool for expanding University housing infrastructure is the use of a public-private partnership mechanism. The program operator considers all options: construction of new dormitories, modernization of existing University housing infrastructures, reconstruction and re-profiling of other housing facilities, transfer of public utilities of student dormitories to trust management under PPP.

The investor is interested in choosing a cost-effective project. Any projects should be paid for, which requires a method of comprehensive socio-economic assessment of the expansion of University housing infrastructure. Investment projects for the modernization of University housing infrastructure must meet all quality evaluation criteria, detailed characteristics of which are presented in table 1.

Table 1 – Qualitative criteria used in evaluating investment projects for the modernization of University housing infrastructure

Quality criterion	Requirement	Compliance with the criterion
Quality criterion 1	-reconstruction of existing facilities for student dormitories should be carried out in accordance with the requirements of safety, reliability and quality; - bringing functioning University housing infrastructures in line with long-term plans and programs for the development of territories; - the need to modernize the municipal infrastructure.	an official document (reference, information) justifying the necessity and feasibility of implementing planned investment projects for the modernization of infrastructure housing facilities
Quality criterion 2	-application of modern technologies and energy-intensive materials in the design of a facility for the modernization of housing infrastructure.	reference, the result of an expert opinion, or others.
Quality criterion 3	-tariff policy, pricing system for utilities, execution of contracts and concession agreements for tariff formation	the information contains long-term parameters of tariffs for the sale of services for the considered utility infrastructure according to previously held tariff competitions.

Source: Compiled by the authors from the source [20]

In addition to qualitative criteria for evaluating the effectiveness of infrastructure projects, an important role is assigned to the system of indicators that represent the ratio of investment spent and results obtained within the billing period for all project participants. The duration of the billing period is determined from the beginning of the project creation, the operational period until the result is achieved, i.e. the investor makes a profit.

Depending on the indicators, the methodology for evaluating the effectiveness of the investment project is determined by quantitative criteria. Since the University housing infrastructure belongs to the social sphere of the economy, it is necessary to assess the investment readiness itself, assess the economic efficiency and assess the social impact of the project. The detailed content of the indicators is shown in table 2.

In general, to assess the effectiveness of investment projects for the modernization of university housing infrastructure, a comprehensive methodology is required, the phased application of which includes the determination of initial data for calculating the efficiency of modernization of the infrastructure using quantitative and qualitative criteria, then the effectiveness of the project is assessed and the selection of the most attractive investment project. the final stage is the preparation of design estimates for the calculation of work and the development of a draft layout of the future investment object.

Table 2 – Quantitative indicators used in evaluating investment projects for the modernization of University housing infrastructure

The indicator	Economic meaning of the criterion	Mathematical expression of the calculation	Conclusion on the project
Investment readiness			
Capital Investment (IC)	Initial investment (capital investment) in an investment project	IC= sum of different funding sources	The composition of investors and the amount of investments are arbitrary.
Statistical methods of economic evaluation of an investment project			
Payback period (PP)	The period for which the investor will return their invested money (investment). The point of equilibrium of cash flows by costs and cash flows by income is determined [21].	$PP = \frac{IC}{CF'}$ where: CF-cash flow over a certain period of time	PP ≥ min Conclusion: the project with the shortest payback period is attractive.
Accounting Rate of Return (ARR)	Indicator for reflecting the profitability of the investment object without taking into account the discount rate	$ARR = \frac{CF_{CP}}{IC}$ where: IC - capital investment in an investment project; CF _{cp} - average cash flow over a certain period of time	ARR > 0 Conclusion: The higher ARR, the more attractive the project is.
Dynamic methods of economic evaluation of an investment project			
Net Present Value (NPV)	Shows the change in cash flows and determines the difference between discounted cash income and expenses [21].	$NPV = \sum_{t=1}^n \frac{CF_t}{(1+r)^t} - IC,$ where: CF _t - cash flow over time t; When investing through the mechanism of Public-private partnership, the cash flow of income is formed from the total addition of the size of the monthly state order for the construction and reconstruction of dormitories, rent payment for accommodation by students themselves, rental of commercial premises, co-financing by the University. r- discounted rate	NPV > 0 Conclusion: The investment project is attractive for investment
Internal Rate of Return (IRR)	Shows the discount rate at which net discounted income is zero.	$0 = \sum_{t=1}^n \frac{CF_t}{(1+IRR)^t} - IC,$	IRR > WACC, where: WACC - minimum return on investment Conclusion: the capital invested in the investment project will create a return higher than the value of the invested capital. Such a project is attractive for investment
Profitability index (PI)	Estimation of the investment value for each invested monetary unit.	$PI = \frac{NPV}{IC}$	PI > 1 The project is attractive for investment and provides additional return on capital.
Discounted Payback Period (DPP)	The time value of the money and the future possibility of reinvesting the money are taken into account.	DPP - > min	
Methods of social evaluation of investment project effectiveness			
Bed space/person		the ratio of beds(m ²) to person	Provision of students, undergraduates and doctoral students with a bed in a student dormitory
Availability of cultural and leisure places		the ratio of places to student population	
Availability of sports areas		the ratio of premises(m ²) to student population	
Availability of canteens		the ratio of places to student population	
Availability of medical facilities		the ratio of beds (m ²) to student population	
Availability of retail space		the ratio of retail space to student population	
Security, service, household, etc		the ratio of number of facilities to student population	
Source: Compiled by the authors from the source [20.21]			

Conclusion. Evaluation of the socio-economic efficiency of investments in the modernization of University housing infrastructure is the main economic tool for choosing a future investment project. To determine the effectiveness of investments in small projects, simple static methods of evaluating performance should be used, while more global projects are calculated using complex dynamic evaluation methods.

The use of various methods for evaluating investment projects makes it possible to determine the most attractive object of University housing infrastructure. The presented methods provide a financial description of the life cycle of an investment project, since simple calculations of coefficients allow you to exclude non-profitable investment projects at the first stage of analysis.

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УНИВЕРСИТЕТТІК ТҰРҒЫН ҮЙ ИНФРАҚҰРЫЛЫМЫН КЕҢЕЙТУГЕ ИНВЕСТИЦИЯЛАР ТИІМДІЛІГІН БАҒАЛАУ ӘДІСТЕМЕСІ

Аннотация. Мақалада университеттің тұрғын үй инфрақұрылымын кеңейтуге салынған инвестициялардың әлеуметтік-экономикалық тиімділігін бағалау мәселесі қарастырылады. Инвестициялық жобалық шешімдердің тиімділігін бағалау инвесторлар да, студенттік қоғамдарды салу және жаңғырту бойынша инвестициялық жобаларды іске асырудың барлық қатысушылары да мүдделі, студенттік қоғамдар қорын кеңейтуге қаржы ресурстарын салудың рентабельділігін айқындаудың негізгі тәсілі болып табылады. Жоғары оқу орындарының тұрғын үй инфрақұрылымы объектілерін салу бойынша инвестициялық жобаның әлеуметтік-экономикалық тиімділігін айқындау үшін көрсеткіштер жүйесі қалыптастырылды. Сапалы және сандық критерийлер негізінде тұрғын үй инфрақұрылымы инвестициялық жобаларының әлеуметтік-экономикалық тиімділігін есептеу әдістері қарастырылды. Студенттік тұрғын үй қорын жаңғырту жобаларының әлеуметтік-экономикалық тиімділігін бағалау әдістерін поэтикалық іске асыру ұсынылды. Қазақстанның барлық өңірлерінде ортақ серіктестіктердің жаңаларын салу және барларын қайта құру есебінен университеттің тұрғын үй инфрақұрылымын кеңейту міндеті қойылды, ҚР БҒМ "Қаржы орталығы" АҚ мемлекеттік бағдарлама операторының деректері негізінде қажеттілікті, қаржыландыру көздерін айқындайды, студенттер, магистранттар мен докторанттар үшін жатақханаларда жаңа орындарды енгізуді қамтамасыз ету үшін ақша ағындарын басқарады, инвесторлармен шарттар ресімдейді.

Түйін сөздер: инвестициялық жоба, тұрғын үй саласы, университеттік тұрғын үй инфрақұрылымы, студенттік тұрғын үй қоры, студенттік жатақханалар, жобаның тиімділік көрсеткіштері, пайда, дисконтталған табыс, жобаның өтелу мерзімі.

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МЕТОДИКА ОЦЕНКИ ЭФФЕКТИВНОСТИ ИНВЕСТИЦИЙ В РАСШИРЕНИИ УНИВЕРСИТЕТСКОЙ ЖИЛИЩНОЙ ИНФРАСТРУКТУРЫ

Аннотация. В статье рассматривается проблема оценки социально-экономической эффективности инвестиций в расширение университетской жилищной инфраструктуры. Оценка эффективности инвестиционных проектных решений является основным подходом к определению рентабельности вложения финансовых ресурсов в расширение Фонда студенческих общежитий, в котором заинтересованы как инвесторы, так и все участники реализации инвестиционных проектов по строительству и модернизации студенческих общежитий. Для определения социально-экономической эффективности инвестиционного проекта по строительству объектов жилищной инфраструктуры высших учебных заведений была сформирована система показателей. Рассмотрены методы расчета социально-экономической эффективности инвестиционных проектов жилищной инфраструктуры на основе качественных и количественных критериев. Представлена поэтапная реализация методики оценки социально-экономической эффективности проектов модернизации студенческого жилищного фонда. Поскольку во всех регионах Казахстана ставится задача расширения жилищной инфраструктуры университета за счет строительства новых и реконструкции существующих общежитий с использованием государственно-частного партнерства, возникает необходимость расширения студенческого жилищного фонда, который на основе данных оператора государственной программы АО "Финансовый центр" МОН РК определяет потребность, источники финансирования, управляет денежными потоками для обеспечения ввода новых мест в общежитиях для студентов, магистрантов и докторантов, оформляет договоры с инвесторами.

Ключевые слова: инвестиционный проект, жилищная сфера; университетская жилищная инфраструктура, студенческий жилой фонд, студенческие общежития, показатели эффективности проекта; прибыль; дисконтированный доход; срок окупаемости проекта.

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REFERENCES

- [1] Address of the President of the Republic of Kazakhstan N. A. Nazarbayev to the people "Five social initiatives" [Obrashchenie Prezidenta Respubliki Kazahstan N.A.Nazarbaeva k narodu «Pyat socialnyh iniciativ Prezidenta»]. March 5, 2018 [Internet]. Available from http://www.akorda.kz/ru/speeches/internal_political_affairs/in_speeches_and_addresses/obrashchenie-prezidenta-respubliki-kazahstan-nanazarbaeva-k-narodu-pyat-socialnyh-iniciativ-prezidenta (accessed September 5, 2020) (In Russian).
- [2] Hirschman A.(1958). The Strategy of Economic Development. New Haven, 1958. P. 187.
- [3] Rosenstein-Rodan P. (1961) Notes on the theory of the Big Push. Push. N.Y., 1961. P. 60.
- [4] Rostow U. (1960) The Stages of Economic Growth. L.; N.Y., 1960. P. 138.
- [5] Kuttybai M., Davletbayeva N., Orynassarova Ye., Kamenova A.(2019) World practice of financing infrastructure projects based on public-private partnership. Reports of the National Academy of sciences of the Republic of Kazakhstan ISSN 2224-5227 Volume 1, Number 323 (2019), 127–132. <https://doi.org/10.32014/2019.2518-1483.20>
- [6] Shalbolova U.Zh., Silka D.N., Kenzhegaliyeva Z.Zh., Yegemberdieva S.M. (2018) Comparative analysis of the development of housing and communal services in Russia and Kazakhstan [Svravnitel'niy analiz razvitiya jilishno_kommunalnogo hozyaistva Rossii i Kazahstana] // Bulletin MGSU, Volume 13, issue 7 (118). 2018. P.836-847 (HAC RF) (In Russian).
- [7]Petrov A. M., Savkina R. V., Kuzmina A. A., Poluleh M. V., Belousova T.(2020) Assessing investment attractiveness through Sustainability criteria in turbulent economy// Bulletin Of National Academy of Sciences of The Republic Of Kazakhstan ISSN 1991-3494 Volume 4, Number 386 (2020), 181–188. <https://doi.org/10.32014/2020.2518-1467.118>
- [8] Buzyrev V. V., Chekalin B. C.(2001) Economics of the housing sector [Ekonomika jilishnoi sferi]. M.: INFRA-M, 2001. 256 p.
- [9]Friedman D., Ordway N.(1997) Analysis and evaluation of income-generating real estate [Analiz i ochenka prinomyaschei dohod nedvijimosti]. Moscow: Delo, 1997. 480 p. (In Russian).
- [10]Braun H.(2005) Research and technology buildings [Text]: a design manual.Boston: Birkhauser - Publishers for Architecture.2005.238 p.
- [11] Chernyak V. Z.(2010) Housing and communal services: development, management, economy: studies'. manual [Jilishno_kommunalnoe hozyaistvo razvitie upravlenie ekonomika]/ V. Z. Chernyak. 2nd ed. Moscow: KNORUS, 2010.391 p. (In Russian).
- [12] Podoprigora Yu. V., Ufimtseva E. V., Yeliseev A., Zakharova T. V.(2019) Identification of the role and functions of infrastructure in the socio-economic and cultural space of the University city[Viyavlenie roli i funkcii infrastrukturi v socialno_ekonomicheskom i kulturnom prostranstve universitetskogo goroda]//Bulletin of the Voronezh state University. Series: Economics and management. 2019. No. 1., Voronezh. P.17-22. (In Russian).
- [13] Trotsenko A. N. (2018) Methodology for determining promising areas of development of the University's social infrastructure as a factor of competitiveness [Metodika opredeleniya perspektivnyh napravlenii razvitiya socialnoi infrastrukturi universiteta kak faktora konkurentosposobnosti]// Practical marketing, 2018. no. 4, P. 22-27 (In Russian).
- [14] Romanova I. M., Trotsenko A. N (2017) Evaluation of the indicators of social infrastructure of the University [Ocenka pokazatelei socialnoi infrastrukturi universiteta]//Practical marketing No. 12 (250), 2017, P. 35-48. (In Russian).
- [15] Sagatdinova A.(2016) Features of the infrastructure of foreign University campuses[Osobnosti infrastrukturi zarubejnykh universitetskikh gorodkov]// Young scientist. 2016. N 1 (105). P. 929-932. (In Russian).
- [16]Noble Akujobi Top 37 World Universities with the Best Infrastructure in 2020/ World Scholarship Forum <https://worldscholarshipforum.com/top-37-world-universities-with-the-best-infrastructure/>
- [17]French N., Bhat G., Matharu G., Guimarães F.O. and Solomon D. (2018) Investment opportunities for student housing in Europe//Journal of Property Investment & Finance, Vol. 36 (6),2018. P.578-584. <https://doi.org/10.1108/JPIF-08-2018-0058>
- [18]La Roche, C. R., Flanigan, M. A., & Copeland, Jr, P. K. (2010) Student Housing: Trends, Preferences and Needs//Contemporary Issues in Education Research (CIER), 3(10), 2010. P. 45-50. <https://doi.org/10.19030/cier.v3i10.238>
- [19] Kazistayev Y. (2020). С 2023 года все студенты будут обеспечены местами в общежитиях. Как это будет сделано?[S 2023 goda vse studenti budut obespecheni mestami v obshezhitiyah. Kak eto budet sdelan] [Internet]. Available from <https://informburo.kz/stati/s-2023-goda-vse-studenty-budut-obespecheny-mestami-v-obshchezhitiyah-kak-eto-budet-sdelano.html> (Accessed 10th September 2020) (In Russian)
- [20]Shalbolova U.Zh., Yegemberdiyeva S.M., Kenzhegaliyeva Z.Zh., Tlessova E.B.(2019) Methodology of economic evaluation of investment projects of housing and communal services. [Metodika ekonomicheskoi ochenki investicionnykh proektov obektov jilishno_kommunalnogo hozyaistva]. Nur-Sultan: L.N.Gumilyov ENU, 2019. 29 p. (ISBN 978-601-337-204-4) (In Russian).
- [21] Zhdanov I. Methods for evaluating the effectiveness of investments. [Metodi ochenki effektivnosti investicii] [Internet]. Available from <https://finzz.ru/6-metodov-ocenki-effektivnosti-investicij> (Accessed 10th September 2020)(in Russian).

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