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PUBLIC-PRIVATE PARTNERSHIP AS A FACTOR IN THE DEVELOPMENT OF THE PHARMACEUTICAL INDUSTRY ECONOMY OF THE REPUBLIC OF KAZAKHSTAN

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The aim. *Public-private partnership is a qualitative method of accelerating the growth rate of the country's economy and its individual components. However, it is also important to skillfully apply the features of this method, assessing the peculiarities of the functioning of a particular country or sector. This makes it relevant to consider the specifics of public-private partnerships in the Republic of Kazakhstan and, in particular, in the pharmaceutical industry. Thus, the main purpose of the study was to assess the peculiarities of the development of the pharmaceutical industry of the Republic of Kazakhstan and the impact of public-private partnerships on it. This includes understanding the role public-private partnerships play in enhancing the efficiency and innovation of the industry.*
Materials and methods. *This study focuses specifically on the Republic of Kazakhstan, as the public-private partnership model varies significantly across countries. The main methods used were analysis, historical method, deduction, and modelling. The specific legislative framework, local economic conditions, and the unique challenges of Kazakhstan's pharmaceutical sector were considered to provide relevant insights.*
Results. *The authors showed that this area is actively developing; every year, many projects are implemented in various sectors of the economy with the help of this type of interaction. Certain results are also observed in the healthcare industry, which borders the pharmaceutical industry. However, in the context of the production of medicines or the latest technologies, there are certain problems. This industry receives insufficient investment, which is why it does not have the opportunity to develop effectively. This indicates the urgency of more decisive state intervention, including through the use of public-private partnerships. In addition, the study describes some projects that have already been implemented in Kazakhstan and shows the benefits that the state has achieved from their implementation.*
Conclusions. *The paper brings new knowledge in the context of the investigation of public-private partnership as a method of increasing the efficiency of the functioning of the economy as a whole, and also allows for a better understanding of some features of the development of the Republic of Kazakhstan as a whole and its pharmaceutical industry in particular*
Keywords: *pharmacy, industry development, public administration, business economics, project management, finance*

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1. Introduction

At its core, a public-private partnership (PPP) is a type of partnership between a business and the state when the solution of public tasks takes place on mutually beneficial terms. Recently, it has begun to play an increasingly important role in developing many countries of the world since it allows solving problems that arise before society and its individual representatives more profitably. For the first time, such a form of interaction was mentioned in the USA at the American Philosophical Society in Philadelphia, which supported the creation of universities and medical schools to make them more accessible to residents. Subsequently, it was described in more detail in the framework of the United Nations Millennium Declaration [1], as well as in the Monterrey Consensus of the International Conference on Financing for Development [2]. Up to this point, within the framework of the world scientific economic literature, there are already many practices from developed countries on how to implement the development of public-private partnerships. Nevertheless, consideration of the current situation in developing countries remains relevant. Thus, within the framework of this study, it was decided to analyze the features of public-private partnerships for the economy of the Republic of Kazakhstan (RK) and focus on its pharmaceutical industry.

Currently, public-private partnership is one of the key mechanisms for the development of Kazakhstan [3]. It is used in many sectors as a fundamental one; every year, an increasing number of projects are implemented, benefiting both state and private entrepreneurs. It also plays a certain role in the pharmaceutical industry and in the healthcare sector. For example, one of the useful possibilities of using public-private partnerships in the phar-

maceutical industry is to provide easy access to medicines for the population and their effective distribution [4]. However, in more detail, these features of interaction in the pharmaceutical industry between government representatives and private companies are provided below.

Many researchers have been engaged in the study of public-private partnerships in general and their effectiveness in comparison with other forms of enterprise functioning. In particular, [5] come to the conclusion that the use of public-private partnerships allows reducing the time and financial costs for the implementation of projects in comparison with conventional methods of their implementation. In turn, the features of public-private partnerships in the pharmaceutical industry were studied by [6]. The study was conducted during the active period of the COVID-19 crisis, which made it possible, although in rather unusual conditions, to examine in great detail the activities and effectiveness of PPP in action. Modern features of PPP functioning in Kazakhstan were considered by [3]. Researchers make a general conclusion that, despite the rather high role of public-private partnership in the country as one of the forms of functioning of enterprises, it is still not well developed enough.

In turn, authors of [7], during the evaluation of PPP functioning in the country, talk about significant successes and prospects in this area. However, they do not sufficiently cover the existing problems and do not offer methods to solve them. At the same time, author of [8] speaks about the insufficient effectiveness of public-private partnerships in the country. Such diversity among scientists in assessing the current development of this type of interaction once again confirms the relevance of this study.

The pharmaceutical industry in Kazakhstan has been identified as a sector with significant potential for economic growth, particularly through using PPP. This goal can be achieved by utilizing PPP models. A noteworthy illustration of this is the establishment of SK-Pharmacy, PPP, which plays a pivotal role in the distribution and production of pharmaceuticals. By concentrating on the advancement of innovation and the augmentation of financial commitments to pharmaceutical research, public-private partnerships are well-positioned to propel substantial growth within this industry. Thus, the purpose of the study was to assess the peculiarities of the development of the pharmaceutical industry of the Republic of Kazakhstan and the impact of public-private partnerships on it. This will facilitate changes in the context of the country's state policy regarding PPP in this area to increase the efficiency of the country's economy.

2. Planning of the research

The methodology employed in the investigation of the development of the public-private partnership in the pharmaceutical industry comprises the following elements:

1. An evaluation of scientific sources on public-private partnerships and their application in the pharmaceutical sector.

2. Relevant legislation, including the Law of the Republic of Kazakhstan "On Public-Private Partnership" and "About the Concession," must also be analyzed.

3. The selection of appropriate research methods, including analysis, the historical method, deduction, and modelling, for the examination of PPP in Kazakhstan's pharmaceutical industry.

4. Collection and analysis of data on existing PPP projects in Kazakhstan, including official reports of the Kazakhstan Public-Private Partnership Centre and company websites.

5. The evaluation of the results of implemented PPP projects using statistical analysis and forecasting methods.

3. Materials and Methods

A significant number of different sources were used to conduct the study. In particular, a significant legislative framework was applied, in particular – the Law of the Republic of Kazakhstan "About the Concession" [9] and the Law of the Republic of Kazakhstan "On Public-Private Partnership" [10]. In addition, information from some international documents was used, particularly the United Nations Millennium Declaration [1] and the Monterrey Consensus of the International Conference on Financing for Development [2]. An important source also became the International PPP Standards from the United Nations Economic Commission for Europe, which describe the methodology and principles of effective management in the field of public-private partnerships, approaches to accounting and ensuring the interests of both sides of the partnership, a description of the organizational and legal forms of such partnerships [11]. Some information from studies by some organizations has also been used, notably – the OIB Study [12] and Asian Development Bank [13].

The authors also used data from the websites of some companies and institutions. In particular, because during the work, a brief review of the activities of the company created using PPP, SK-Pharmacy [14], some data about it published on its official website were used. The same applies to the state investment holding Samruk-Kazyna [15], the pharmaceutical company of India "Strides Pharma Science Limited" [16], Kazakhstan Centre for Public-Private Partnership [17], and the old website of this organization [18].

Using an institutional approach, the authors examined and studied the relationship between private enterprises and government representatives in Kazakhstan. In addition, a systematic approach was used, which allowed the evaluation of individual components that affect PPP in Kazakhstan and assessing their role in this process. During the research, the authors also actively used some scientific methods. In particular, using the analysis, it was possible to conduct a detailed review of the information selected for writing the paper and draw conclusions based on it about the current state and development of public-private partnerships in the country. Also important was the historical method, which provided the oppor-

tunity to analyze the development of PPP in the country in retrospect. In turn, the deduction allowed for assessing the main reasons for the current state of PPP in the country, considering its general current state.

Moreover, the authors used some of the simplest statistical research methods to process statistical data. Using the forecasting method, the authors tried to formulate a probable development of events regarding the future development of the pharmaceutical industry in the case of certain trends in the context of PPP projects in it. The study used modelling to create detailed schematic representations of public-private partnerships in Kazakhstan's pharmaceutical sector. These models illustrate the flow of resources, responsibilities, and management structures between public and private entities, providing insights into operational efficiency and potential bottlenecks within the PPP framework and enabling a better understanding of its strengths and weaknesses. The graphical method was used directly to build such diagrams and tables.

4. Results

To begin with, it should be noted that the health sector is very close to the pharmaceutical industry, although certain differences between the two can still be found. For example, the pharmaceutical industry can be characterized as one that specializes only in the production of medicines, while healthcare is a broader concept related to medical components, such as the arrangement of hospitals. Thus, within the framework of this study, both components related to healthcare and purely pharmaceuticals are considered.

In general, the legislative framework in the context of PPP in the country began to form back in 2006 with the Law of the Republic of Kazakhstan "About the Concession" [9]. However, concessions were not a popular enough form of partnership due to excessive regulation and bureaucratic difficulties, which made it relevant to form new options for such interaction. Thus, already in 2015, the Law "On Public-Private Partnership" was adopted, which significantly expanded the possibilities of interaction between the state and its representatives with local entrepreneurs [10]. It was its formation that became the main impetus in the context of the qualitative functioning of public-private partnerships as such.

A useful structure in the context of PPP development in Kazakhstan Centre for Public-Private Partnership [17], founded in 2004. Its main objectives are promoting and developing public-private partnerships in the country, developing and promoting new models of cooperation between the state and private enterprises, and providing various services to facilitate the implementation of these projects in this area. The organization's website offers a variety of information on public-private partnership projects that it has helped to implement in the country. Conveniently, they are distributed by sectors: this is how one can find data on projects in housing and community services (HCS), environmental management, transport, education, and other areas. Unfortunately, the Kazakhstan Centre for Public-Private Partnership does not provide data on the number of projects in the field of pharmaceuticals, but there is data on healthcare. Thus, during the period of the organization's functioning, one of the most important projects that have been implemented in the field are catering for medical institutions in Karaganda, the construction of centres for medical and social, rehabilitation and prosthetic and orthopaedic services in the same city, a rehabilitation centre in Almaty, an ambulance substation, a city polyclinic and advisory and diagnostic centre [17].

In general, the official website mentions in detail about 61 projects that were implemented in the country during the period of the organization's operation. However, in fact, there are many more of them. However, this information has become less accessible since the organization has switched to a new domain and no longer provides detailed information about the number of projects implemented. Nevertheless, the old website contains much more information: in particular, as of August 1, work was carried out on more than 1,300 projects with a total investment of KZT 1,349.2 billion in the country. This information is provided in Table 1.

Table 1

Data on the number of PPP projects implemented and under consideration in Kazakhstan at the end of 2021

Field	1*	2*	3*	4*	5*	6*	7*	8*	9*	10*	11*	12*	13*	14*	15*	16*	17*	18*	19*	20*
Total	74	39	58	255	86	25	93	37	255	92	93	24	85	–	–	–	–	–	–	85
Health and social services	3	7	8	1	1	1	1	1	1	35	1	0	56	–	–	–	–	–	–	56
Education	47	22	21	237	66	5	8	18	237	54	8	13	19	–	–	–	–	–	–	19
Culture and sports	3	2	5	2	0	6	8	1	2	1	8	0	4	–	–	–	–	–	–	4
Manufacturing industry	0	1	0	0	0	0	0	0	3	0	0	0	0	–	–	–	–	–	–	0
Power industry	13	2	19	3	7	1	55	8	4	1	55	0	0	–	–	–	–	–	–	0
Transport and infrastructure	6	3	3	4	5	4	3	1	1	0	3	1	0	–	–	–	–	–	–	0
Information and communication	1	2	0	0	0	0	0	0	0	0	0	0	1	–	–	–	–	–	–	1
Other	1	0	2	8	7	8	18	8	7	1	18	10	5	–	–	–	–	–	–	5

Note: 1 – Almaty; 2* – Astana; 3* – Shymkent; 4* – Abai region; 5* – Akmola region; 6* – Aktobe region; 7* – Almaty region; 8* – Atyrau region; 9* – East Kazakhstan region; 10* – Jambyl region; 11* – Jetisu region; 12* – West Kazakhstan region; 13* – Karaganda region; 14* – Kostanay region; 15* – Kyzylorda region; 16* – Mangystau region; 17* – Pavlodar region; 18* – North Kazakhstan region; 19* – Turkestan region; 20* – Ulytau region. Source: compiled by the authors based on data from the Kazakhstan Centre for Public-Private Partnership [17].*

As can be seen from Table 1, the number of PPP projects exhibits considerable variation across regions and sectors. To illustrate, the East Kazakhstan and Abay regions have the highest number of projects, with the education sector representing the most prominent area for public-private partnership initiatives, followed by health and other services. However, it is necessary to address certain inconsistencies in the data. Firstly, it should be noted that the table does not provide data for some regions, including Kostanay, Kyzylorda, Mangystau, Pavlodar, North Kazakhstan, and Turkestan. This may be due to incomplete or inaccessible information from these areas. Secondly, an examination of the data reveals inconsistencies in categorising projects by sector. For instance, the "Other" category indicates that certain sectors may not have been accurately categorized or that the exact contributions of these sectors were unclear in the data sources. Furthermore, the number of projects in some regions appears to be identical, such as in the Ulytau and Karaganda regions, which calls into question the veracity of the data reporting. This may be attributed to a lack of updated information or duplication in data entry. To resolve these issues, it would be prudent for the Kazakhstan Centre for Public-Private Partnership to provide clearer, more detailed project data. Returning to the previous level of transparency in their new domain would facilitate easier access to accurate information, thus allowing researchers to draw more definitive conclusions about the effectiveness of PPP in various regions and sectors. Based on general knowledge about public-private partnerships and the specifics of their implementation in Kazakhstan, it is possible to build a general model of such interaction, which is shown in Fig. 1.

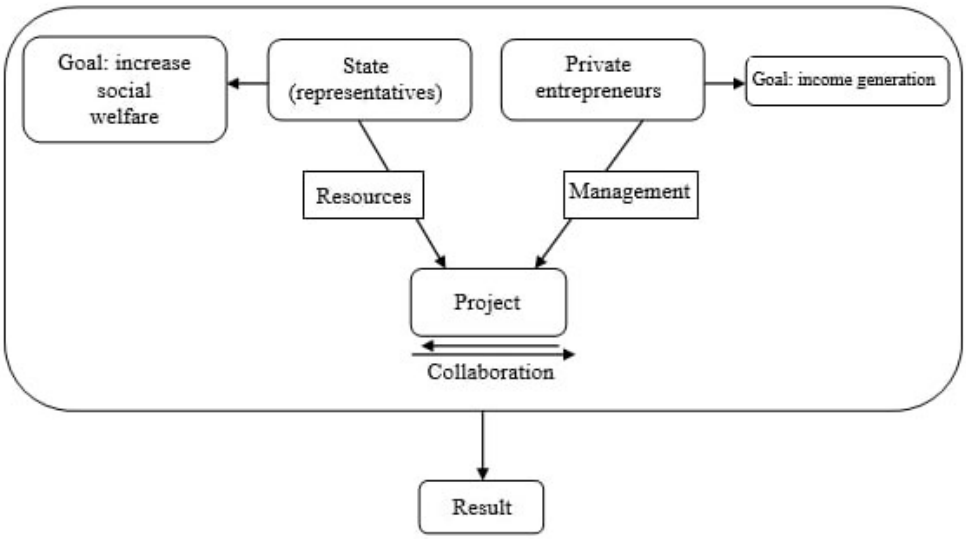

Fig. 1. Public-private partnership model. *Source: compiled by the authors*

As can be seen from Fig. 1, the state provides resources for the implementation of such projects, while private entrepreneurs take over the management of them. However, such an interaction should not stop there. Both parties should have unique knowledge in the context of the management of various projects that they can exchange; in addition, the state can provide various training programmes for entrepreneurs or secure more comfortable conditions for obtaining the non-financial resources they need [19]. This will help to achieve significantly better results from PPP projects.

In general, public-private partnerships can be quite an effective tool for developing the pharmaceutical industry in any country [20]. The reason for this is that this type of cooperation allows you to combine the resources of the public sector and business to solve a variety of complex problems that arise in the pharmaceutical industry. This applies, for example, to the creation of new medicines, the development of health infrastructure or increasing the availability of medicines for the population [21]. This remains especially relevant for developing countries [12]. The reason for this is that companies in this industry in such states have very limited financing opportunities, which does not allow them to conduct high-tech research. Thus, the combination of state resources and entrepreneurial abilities can lead to a significant increase in the productivity of the industry. It also gives a significant boost in terms of innovative development [22]. As for the distribution of affordable medicines among the population, in this case, funds from the state budget can be used to pay for the medicines themselves, while the private companies can provide their supply and distribution on the territory of the country.

As mentioned above, in Kazakhstan, most public-private partnership projects that are somehow related to pharmaceuticals cannot be called purely pharmaceuticals: the characteristic of "projects from the healthcare sector" is more suitable for them. Thus, the main strategic areas of the development of this system at the moment are the modernization of medical organizations and the construction of new facilities. For example, in 2022 it was planned to open 6 new PET centres (positron emission tomography). However, as of the beginning of 2023, only three were built: 2 private medical centres in Almaty and another centre in Shymkent [23]. Three more centres are planned to be launched in 2023: 2 in Astana and 1 in Aktobe [24]. Although the plans were not completed on time, this does not necessarily indicate the inefficiency of public-private partnership: the reason for this was the problems caused by the COVID-19 crisis. If the plan is completed by the end of 2023, this will indicate the real effectiveness of PPP. In addition, with the help of state support, in 2019, the Republic of Kazakhstan began conducting molecular genetic research within the framework of Guaranteed Volume of Free Medical Care (GVFMC), which indicates both the prospects of finding domestic

solutions to combat cancer and the possibility for further development of technologies [25].

It is possible to note other features of the development of healthcare in the country, but the pharmaceutical industry in the Republic of Kazakhstan is developing at a much slower pace. This is primarily conditioned by poorly developed market institutions, which negatively affects all sectors of the economy as a whole [26]. The contribution of the pharmaceutical industry to GDP also remains low, and it lacks investment due to the fact that it is inferior in profitability to foreign companies that occupy a dominant position in the market. Despite the actions of the state in the context of investments in the industry (increase in the production capacity of JSC "Himfarm" (Shymkent), modernization of the pharmaceutical plant (Almaty), the construction of the pharmaceutical plant "ELEAS" (Almaty region)), it was not possible to completely solve this problem. This is a significant problem for the development of the industry and speaks about the role of public investment in it at the moment. Nevertheless, one of the main goals of pharmaceutical development in the country is to increase the share of domestic products in the market of Kazakhstan from 17 % (in 2020) to 50 % (in 2025), the achievement of which could have a significant positive impact on this field of activity [13].

One of the latest examples of the successful application of PPP in the pharmaceutical sector in Kazakhstan is the joint creation of SK-Pharmacy [14] in 2009, which is one of the largest manufacturers of finished dosage forms in the country at the moment. It was formed through the joint efforts of the state-owned company Samruk-Kazyna [15], an investment holding aimed at improving the national welfare of the Republic of Kazakhstan, and a large pharmaceutical company of India "Strides Pharma Science Limited" [16]. The latter, in particular, contributes to the development and provision of knowledge and experience in the field of pharmaceuticals for SK-Pharmacy and is also a key supplier of various kinds of medicines. At the moment, SK-Pharmacy is engaged in the production and supply of a fairly large range of medicines on the territory of Kazakhstan and some foreign countries. Its goal is also to increase the quality of medical services in the country and simplify access to medicines for the population. A notable success within Kazakhstan's pharmaceutical industry is the SK-Pharmacy initiative, established as a PPP in 2009 [27]. This partnership between the state-owned company Samruk-Kazyna and the private pharmaceutical company Strides Pharma Science Limited has significantly contributed to the production and supply of medicines. The SK-Pharmacy initiative has led to a notable improvement in access to essential medicines. For instance, the provision of diabetes medications between 2018 and 2020 amounted to KZT 46.3 billion [4]. Such initiatives illustrate the potential of PPP to enhance both the availability of medicines and the overall efficiency of the pharmaceutical industry.

5. Discussion

The study considers how different researchers assessed the role and benefits of public-private partnerships. In particular, authors of [28] approached the assessment of this issue in great detail. Thus, they have some scepticism about the fact that the use of PPP can increase the quality of the functioning of enterprises. Scientists claim that, in fact, an insufficient number of studies have been conducted that could prove the direct positive impact of the use of such forms of cooperation on the efficiency of the functioning of companies [29]. Although, in part, authors of [28] may be right because quantitative mathematical research on whether the public-private partnership is effective is relevant, there are quite convincing theoretical arguments about why it has a positive impact on the work of companies. Author of [30] noted in his study that the use of PPP forms at the moment is most often applied by countries in which the apparatus of state administration does not function effectively. And although this may indicate that public-private partnership is only a method of short-term improvement in the performance of some responsibilities that local authorities have been unable to cope with, it still indicates that its application is more than necessary for developing countries in this period of their development.

Features of the use of PPP in the pharmaceutical industry were considered by [31]. Researchers conducted a study on the effectiveness of public-private partnerships in this area. They came to the conclusion that PPP biomedical companies have begun to bring tangible results. This became possible because with such a joint operation, not only pharmaceutical industry companies and individual research centres have a common interest in conducting such activities, but also healthcare funds, patient organizations, and regulatory authorities. According to the researchers, in the future, we should expect only an even greater manifestation of the prospects associated with the use of public-private partnerships. However, to do this, it is worth continuing to work actively in this area and improve existing indicators. As noted by the authors in the framework of the study above, Kazakhstan has not yet seen sufficient activity on the part of the authorities to support the pharmaceutical industry and ensure its sufficient level of investment [32]. Nevertheless, even the funds that were allocated already had the opportunity to bring significant benefits to the industry. Thus, the data of the study of the researchers once again confirms the fact that active activity in the context of public-private partnerships can help achieve significant success for the pharmaceutical industry of the country, making it more competitive in the international arena. Authors of [33] also noted that recent data indicate existing successes in the context of the use of PPP for the development of pharmaceutical enterprises. Scientists also expect that the impact of PPP will grow in the future, given the increase in both data that needs to be analyzed for high-quality research and continuous public investment in research. PPP has proven an effective strategy for fostering innovation in the pharmaceutical sector, particularly in the context of the global response to COVID-19. During this period, PPP played a pivotal role in the accelerated development and distribution of vaccines. Despite its nascent state, Kazakhstan's pharmaceutical industry could potentially benefit from a more assertive implementation of PPP. One potential avenue for addressing

the challenges of attracting investment to the sector, particularly in research and high-tech pharmaceutical production, is to foster deeper collaboration between the government and private enterprises. Such partnerships can facilitate not only the bridging of financial gaps but also the generation of the technological innovations required to enhance Kazakhstan's pharmaceutical industry's global competitiveness.

A more applied study on PPP analysis in the pharmaceutical industry was conducted by [34]. Scientists considered the successes that have been achieved in the context of the use of public-private partnerships in this area in Nigeria. Thus, they note the high role not only of state financing as such but also of high-quality interaction in the context of the management of internal processes of such enterprises and staff motivation and their training. Indeed, as mentioned above, public-private partnerships should not end only with the provision of funds to private enterprises: both parties should exchange knowledge in order to achieve as much success as possible in achieving common goals. Although this may be quite difficult due to the different forms of work of representatives of the state apparatus and private managers, however, it is worth striving for.

The features of public-private partnership for the development of the Republic of Kazakhstan, namely its innovative component, were studied in [35]. The scientist notes that the development of PPP by industry in the country is significantly different; thus, most of the projects are implemented in the field of education and healthcare, while the rest of the sectors lag far behind. Describing the current state in the field of innovation and the latest technologies, the scientist emphasizes that there are certain positive trends in it. The researcher gives advice in the context of the national policy in this area, in particular, proposes to introduce a set of organizational, economic, informational, financial, legal, and institutional changes in order to secure the necessary training and quality preparation of PPP projects in the conditions of innovative development of the Republic of Kazakhstan. In the paper above, the authors also mention that the development of innovativeness in the pharmaceutical industry is the most useful component that public-private partnerships provide for Kazakhstan [36]. This is especially important, given the general course of the country in the context of the development of the latest technologies.

An important study in the context of the investigation of the interaction of the state and private entrepreneurs in the pharmaceutical industry and healthcare was carried out by [25]. The researcher noted that the process of implementing PPP in the context of these areas differs significantly from each other. Thus, the state has a large number of successes in healthcare and many projects related to it. At the same time, pharmaceuticals, as such, do not receive due attention, which is primarily conditioned by their unprofitability compared to companies in other countries. The researcher writes about some tips related to increasing the efficiency of the functioning of the healthcare industry but pays little attention to pharmaceuticals. Therefore, it is worth adding that the low level of profitability in the industry primarily arises from insufficient innovative development and technological equipment. It turns out that lower profitability is associated with a lack of funds, which are difficult to attract due to low profitability. It is at such moments that the state should intervene with its own funding opportunities. Although the positive effect may not be achieved immediately, however, with a long-term and gradual policy, it will be noticeable, which can significantly increase the competitive abilities of the country's pharmaceutical industry [37].

Thus, the public-private partnership remains an important component of the economy of the Republic of Kazakhstan. It successfully copes with its responsibilities, which is evident from the number and quality of PPP projects implemented. However, there are still industries that still receive insufficient attention from the state for their more successful functioning. One of them is the pharmaceutical industry. Although its inherent development trends indicate some problems in the context of competitiveness in comparison with foreign ones, when receiving more serious financing, they can show significantly better results. To do this, it remains only to build a high-quality state policy in this industry and find truly promising enterprises in the industry with which it would be possible to conclude long-term permanent agreements. This will significantly affect both the development of the pharmaceutical industry and the Kazakh economy as a whole.

Practical relevance. The study emphasizes the significance of public-private partnerships in Kazakhstan's pharmaceutical industry, highlighting their potential to enhance medicine access, modernize healthcare, and boost domestic production. It underscores the need for sustained state intervention and private sector collaboration.

Limitations of the study. This study on Kazakhstan's pharmaceutical sector lacks direct empirical data on specific PPP projects, requiring more granular analysis for better financial and operational dynamics assessment. The results may not be generalizable to other sectors or countries.

Prospects for further research. Future research should explore Kazakhstan's PPP's impact on energy, agriculture, and technology sectors, as well as its long-term outcomes in the pharmaceutical industry, and compare its model with other countries to understand its global applicability.

6. Conclusions

Thus, within the framework of this study, an analysis of public-private in Kazakhstan as a whole was carried out. It was shown that at the moment, a significant number of joint public and private projects are functioning in the country and are being implemented, including with the help of the Kazakhstan Centre for Public-Private Partnership. It was shown that the healthcare industry, which somehow borders on the pharmaceutical, is actively developing on the part of the state using a variety of methods. The authorities are implementing programmes related to the construction of new medical centres and the development of medicines, as well as making them more accessible to citizens. At the same time, there are certain difficulties in the context of direct support to the pharmaceutical industry. It is believed

that the main reason for this is its low profitability compared to foreign companies, which complicates the process of attracting investment, and public-private partnerships are also used relatively less often for them.

Nevertheless, under the conditions of a gradual policy of supporting the industry, it will be possible to achieve better results and make its enterprises more competitive. This is what the state authorities should strive for. Despite indications of advancement, the pharmaceutical industry in Kazakhstan still necessitates substantial state assistance and investment to achieve its full potential. The further advancement of PPP could offer a viable strategy for overcoming the current financial and technological barriers. Long-term agreements with promising pharmaceutical enterprises could facilitate an increase in domestic production and a reduction in reliance on foreign imports. With sustained support and a well-crafted PPP strategy, Kazakhstan's pharmaceutical sector could experience significant growth, thereby becoming a key contributor to both the national economy and public health.

One of the companies whose activities were evaluated in sufficient detail within the framework of the study was SK-Pharmacy. The authors have shown that the use of public-private interaction in the management of this enterprise has achieved significant success in terms of providing easy access to medicines for a large number of citizens. This is one of the successful examples of the use of public-private partnerships in the pharmaceutical industry in the country, which should not remain isolated. Thus, in the future, the state authorities should pay much more attention to the development of this area and actively use PPP to support it. In subsequent studies, it would be relevant to consider how public-private partnership affects the development of other sectors of the country's economy, except pharmaceutical, for example, energy, agriculture, and healthcare.

Conflict of interest

The authors declare that they have no conflict of interest in relation to this research, whether financial, personal, authorship or otherwise, that could affect the research and its results presented in this paper.

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Data availability

Data will be made available at a reasonable request.

Use of artificial intelligence

The authors confirm that they did not use artificial intelligence technologies when creating the current work.

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