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## PUBLIC-PRIVATE PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT OF AGRICULTURE\*

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**Abstract.** The agrarian reform in Kazakhstan substantially changes the approach to creating the competitive entities of the agro-industrial complex that is part of agricultural policy leading towards food security and sustainable development. Transition to innovative development triggers an active search of instruments engaging private equity and allowing, at the same time, the most practical combination of interests of the state and entrepreneurial structures. As such tool, the mechanism of public-private partnership is considered. The article's authors explore the specifics of the development of public-private partnerships (PPP) in the economy of Kazakhstan, especially in agriculture. In this research, the authors identified factors that affect the development of public-private partnerships in sustainable development conditions. The authors also analysed different interpretations of the public-private partnership and discussed the peculiarities of its use. The experience of the development of public-private partnerships in other countries is considered. The paper offers analytical material that characterises Kazakhstan's public-private partnerships development level. The conclusion is made about the need for active development of PPP in the agriculture of Kazakhstan.

**Keywords:** public-private partnership; agriculture; sustainable development; agro industrial complex; innovative development; Kazakhstan

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**JEL Classifications:** Q16, Q18

### 1. Introduction

Kazakhstan is the world's largest landlocked country, with one of the lowest population densities in the world. It has a strategic location in the centre of the Eurasian continent at the crossroads between the People's Republic of China (PRC) and Western Europe, connected by road and rail transport and a port on the Caspian Sea. Kazakhstan is a middle-income developing country with a high economic dependence on energy resources. Kazakhstan has the world's ninth-largest oil reserves, accounting for 21% of its gross domestic product (PPP) in

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2020 and about 73% of exports in 2022. As a result of the coronavirus infection (COVID-19) pandemic, the country's PPP fell for the first time in two decades, falling by 2.5% in 2020 and recovering by 4.3% in 2021 (Export Potential of Kazakhstan, 2023).

Kazakhstan's updated National Development Plan until 2025 shows a medium-term vision of diversifying the economy through agro-industrial reforms and support for small and medium-sized enterprises. The main goal of this plan is to increase productivity as a driving force and help the country become one of the 30 wealthiest economies by 2030 by increasing private investment in the post-pandemic period (National Development Plan, 2021).

In his Message, the Head of State K.K. Tokayev, outlined the main principles for a new economic policy, which provides for guarantees of private property, a favourable investment climate, fair competition, public finance management, reduction of administrative barriers, reduction of the role of the state in the economy, and social protection (Message of the Head of State Kassym-Jomart Tokayev to the people of Kazakhstan, 2022).

Kazakhstan is historically an agrarian country, and to position itself as a prosperous state, we need to pay special attention to developing the agricultural sector. Agriculture in Kazakhstan has the potential to grow due to its vast land resources and the recognised quality of its products. The sector's potential needs to be realised through a transition to sustainable agriculture that can restore fertility to the land, create new employment opportunities and ensure greater independence from food imports.

The support and development of agriculture is often called one of the main tasks of the state. In recent years, the first persons of the republic have repeatedly spoken about this; the need to take action was voiced in the Messages; government agencies developed new programs and made changes to old ones. The role of the state in the sector remains very large. According to FCB Analytics, more than 65% of the current debt of agricultural producers is formed to organisations with state participation and credit partnerships, the total loan portfolio of which, as of August 1, 2021, amounted to about 850 billion tenge (Analytical Digest, 2021).

World and Kazakhstan's experience shows that public-private partnership is one of the crucial tools for expanding the resource base and attracting untapped reserves for economic growth, improving the institution of public administration and social ownership in the agricultural sector. This partnership shows relatively new trends in the world economy, reflecting the expansion of interaction between business and the state. The state can provide a stable regulatory framework, organisation of events for interaction with society, financial leverage, and various types of relief and rewards in the form of tax incentives, subsidies, etc. (Moreddu, 2016; Yang et al., 2020).

Considering the further development of a market economy in the development of public-private partnership projects, the problem of finding optimal economic measures for interaction between the state and the private sector becomes relevant.

## **2. Literature Review and Problem Statement**

The state of affairs in agriculture differs greatly depending on the region, which is primarily due to different natural and climatic conditions. The northern areas are focused on grain crop production, which develops on lands without irrigation. Animal husbandry is less widespread and is characterised by a relatively high proportion of cattle in the total livestock. There is more agricultural machinery at agricultural enterprises than vehicles, but the entire fleet is quite old. Regarding technical equipment, the west of Kazakhstan is characterised by a relatively fresh fleet of vehicles with a fairly ageing (but renewing) fleet. Southern Kazakhstan, more than other macro-regions, gravitates towards animal husbandry. Owners usually have relatively little land, but it is more likely to be irrigated. There is much more transport registered for farmers than agricultural machinery, but as a rule, it is old.

Farmers often take loans of up to 1 million tenge (Analytical Digest, 2021), but only sometimes for a short period. Central and eastern Kazakhstan stand out little from the point of view of agricultural development and from the point of view of lending. But these regions are characterised by a relatively old transport fleet and agricultural machinery.

For the development of the agricultural sector, it is necessary to attract additional sources and resources for the development of agric-food infrastructure, increasing the profitability of farming activities, and attracting various categories of participants in the agricultural process, from minor to prominent entrepreneurs, including farmers. Achieving this goal is possible by intensifying the use of opportunities for communication between the public and private sectors in the format of public-private partnerships and with the involvement of foreign partners. Based on the experience of developing countries, public-private associations have taken a firm place in the development of agriculture and have proven their practical effectiveness, acquiring the status of an integral element in ensuring food security.

At the present stage of the development of society, creating a sustainable management mechanism in the rural economy is one of the significant factors in the growth of our country's competitiveness. With the strengthening of the economy of Kazakhstan, the mechanism of management in agriculture began to function more rationally. The advantages of domestic agricultural production should be used to produce competitive food products. Kazakhstan faces the task of improving the population's standard of living by accelerating the country's socio-economic development and the regions in particular, including the development of infrastructure for providing services to the people. The limited budgetary resources to ensure the implementation of socially significant objects is one of the reasons for the emergence in our country of public-private partnerships and borrowing the necessary implementation mechanisms based on the experience of foreign legal systems. In this regard, the PPP mechanism is currently used as one of the most effective tools of the innovation system, allowing regions to develop and grow dynamically. At the same time, due to implementation problems and imperfect legislation, the PPP mechanism is poorly designed, especially in agriculture (Kuznetsov et al., 2017; Tireuov et al., 2022).

PPP has wide application in developed countries. PPP projects greatly influence the indicators of the strategic goals of the countries and their regions' socio-economic development. The most successful projects are being implemented in the USA, Israel, Ireland, Italy, Great Britain, Germany, France and Japan. The leaders of PPP are the UK, France, USA and Germany. The main areas attracting business to PPP projects are healthcare, construction and reconstruction of roads, housing and communal services, infrastructure and education. "The main reason for the rapid growth of PPP projects is the absence of restrictions related to the budgets of state organisations".

Public-private partnership in the agro-industrial complex is a form of long-term mutually beneficial cooperation between the state and business to implement and develop at the regional and local levels socially significant projects for the modernisation of the agro-industrial complex with pre-established state requirements for their results, in which the responsibility for project preparation lies entirely on the private partner (Nechaev et al., 2020; Kospanov, 2021; Development Strategy, 2022).

In general, the governments of developed countries use public-private partnerships (PPP) for the following reasons (Kospanov, 2021):

1. PPPs encourage private sector capital injection.
2. In the case of large infrastructure projects, PPPs use private sector financial capital, which speeds up the construction of the project and the provision of services.
3. PPPs make projects affordable.
4. PPPs provide value for money.
5. In a PPP, each risk is allocated to the party that can best manage or absorb it.
6. PPPs force the public sector to focus on outcomes and benefits from the outset.

7. With PPP, the quality of service must be maintained throughout the entire period of cooperation.
8. During the implementation phase, an independent consultant is hired to ensure compliance by both public and private parties with the terms of the contract/concession agreement.
9. PPPs drive innovation.

Public-private partnerships have been investigated to reveal the strengths and weaknesses of different types PPP, to orchestrate various types of innovation policy instruments (Hermans et al., 2019; Mouraviev, 2021), to enhance global food security (Smyth et al., 2021; Wang et al., 2021; Fanzo et al., 2021). Continuous analysis PPP processes in different countries would lead to more effective policies in this area.

### **3. The aims and objectives of the study**

Today, Kazakhstan has a vast potential for growth in agricultural production and infrastructure development. New tools to support the industry are needed to increase the efficiency of the use of production resources. To further ensure the development of the agro-food complex, it seems necessary to use the practice of public-private partnership. This article aimed to study and analyse the development of public-private partnerships in agriculture in the context of sustainable development. The mechanism of work of public-private partnerships in agriculture in our country has yet to be thoroughly studied, and its potential has yet to be revealed. Therefore, an in-depth study, generalisation and systematisation of the experience of using this mechanism by national and foreign companies that have achieved high results in this area are required. The main tasks were:

- identification of trends in the dynamics of development of agriculture in Kazakhstan,
- disclosure of the concept of public-private partnership,
- analysis of the current state of public-private partnership in Kazakhstan.

### **4. The study materials and methods**

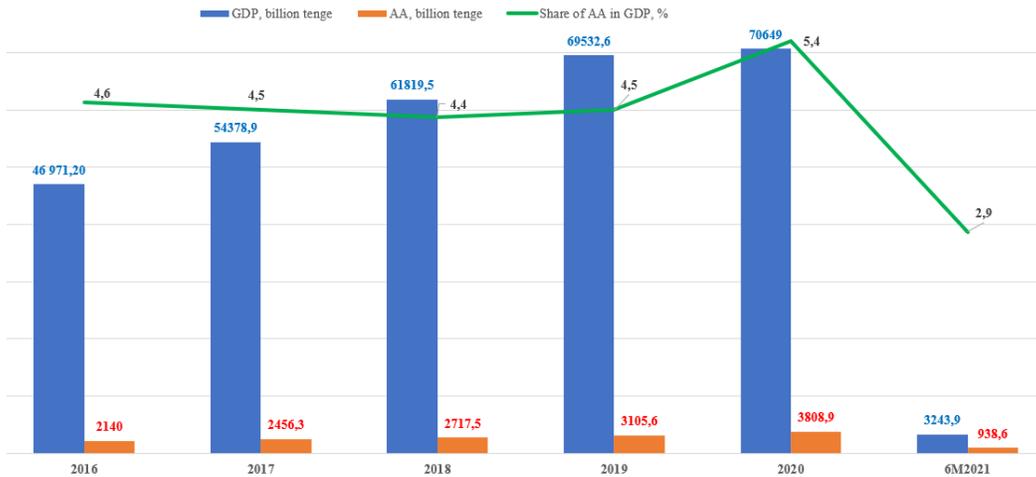
The research focused on systematising domestic and foreign works centred on public-private partnerships. The use of system analysis allowed us to pinpoint the main advantages and disadvantages of the implementing mechanism of PPP and to assess the possibility of its application for the agriculture of Kazakhstan. It also allowed us to identify the best foreign government regulation practices and justify their applicability in Kazakhstan in agriculture in the context of sustainable development. The conclusions were the basis for proposals to develop an acting mechanism for implementing PPP projects in the agricultural sector. The empirical study used the data of the Agency of Statistics of Kazakhstan, the Ministry of Agriculture, media materials, and published reports on the development of public-private partnerships by the Kazakhstan Public-Private Partnership Center.

## **5. Research Results**

### **5.1. Identification of trends in the dynamics of development of agriculture in Kazakhstan**

The agricultural industry is one of the most critical sectors of the economy, which affect the food security of the country, as well as the labour and settlement potential of rural areas. The agro-industrial complex of Kazakhstan has good prospects for further development: the export positions of the oilseed and meat sectors are strengthening, and in terms of grain and flour, our country has quickly become one of the largest exporting countries in the world.

The membership of the Republic of Kazakhstan in the Eurasian Economic Union (EAEU) and the World Trade Organization (WTO) creates opportunities and, at the same time, places high demands on competitiveness both in the domestic and foreign markets (Agriculture is the backbone of a strong economy, 2019).

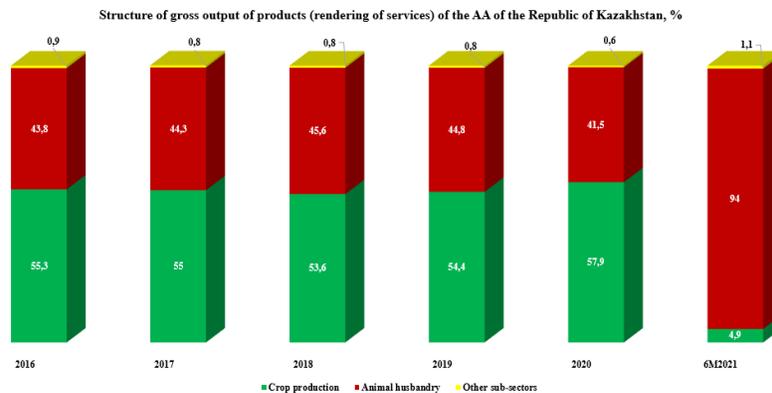


**Figure 1.** The share of the agricultural sector in the PPP of the Republic of Kazakhstan  
*Source:* Kazakhstan Stock Exchange KASE, 2021

Between 2016 and 2021, the dynamics of the main indicators of agricultural production show that (Figure 1):

- the share of the industry in the total PPP slightly increased;
- the share of operating agricultural enterprises in the total number of registered agricultural organisations has not changed;
- the growth of investments in enterprises is mainly due to crop and livestock production.

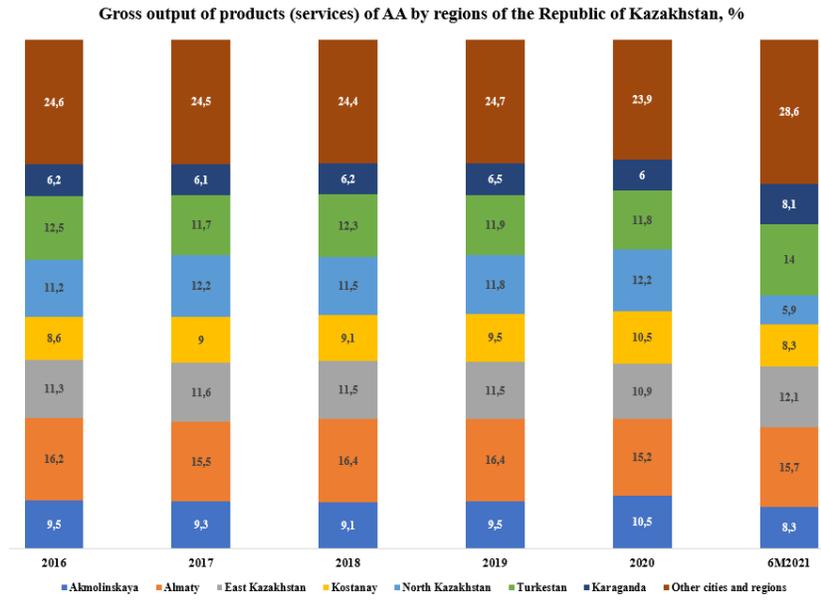
According to the KASE report, for 2016-2020, the actual increase in Kazakhstan's PPP amounted to 50.4%, while the share of agricultural enterprises in PPP slightly increased from 4.6% to 5.4%. As of July 01, 2021, the percentage of farming enterprises in total PPP amounted to 2.9%, with a decrease of 2.5 basis points in the first half of 2021 (Agricultural Industry of the Republic of Kazakhstan, 2021).



**Figure 2.** The structure of the gross output of the agricultural sector in Kazakhstan, %  
*Source:* Kazakhstan Stock Exchange KASE

94% of gross output accounted for animal husbandry (1,425 billion tenge), 4.9% for crop production (75 billion tenge) and 0.1% for other sub-sectors (agricultural services, fisheries and forestry, hunting). The growth in the volume of livestock production in the first half of 2021 is due to an increase in livestock and poultry slaughter volume in live weight by 5.5% and raw cow's milk yield - by 3.2% (see Figure 2).

As noted in the KASE report, geographically, the most developed regions in terms of gross output of agricultural enterprises are the Almaty region (15.7% of the gross production (services) of agricultural enterprises), Turkestan region - 14% and East Kazakhstan region - 12.1% (Agricultural Industry of the Republic of Kazakhstan, 2021), see Figure 3.



**Figure 3.** PPP of the agricultural sector by region, %  
 Source: Kazakhstan Stock Exchange KASE

In 2021, 16.5 million hectares of land were sown with various crops in Kazakhstan. The number of registered livestock exceeds 40.5 million heads. Only in the first half of the year, the export of wheat alone brought in 633.1 million dollars, having increased by 31.2% over the year; barley - \$109.2 million (+33%). The number of registered agricultural machinery exceeds 189 thousand units; vehicles registered for farmers - 193.6 thousand units. At the same time, the average and median age of equipment is decreasing. There are problems in agriculture. But the sector's potential makes it attractive for investors and lenders.

The sown area in Kazakhstan is increasing. In 2021, 145.7 thousand hectares more were sown than in 2020 (up to 16.5 million hectares). In relative terms, the growth was 0.9%. The most substantial growth (+397 thousand ha) was recorded in the Akmola region, but this increase was partially offset by a drop in sowing volume in the Kostanay region (-282 thousand ha). Compared to 2020, the areas sown with wheat and sunflower increased significantly, although, in some places, this happened due to a reduction in barley areas. In general, these crops grow in 75% of Kazakhstan's fields. The number of landowners is decreasing. Over the year, their number decreased by 2.6%, amounting to 111 thousand units (every second landowner has a sown plot in the Turkestan or Almaty region). As a result, in most areas, farms are consolidated. The strongest is in the Akmola region, where the average area, compared to 2020, increased by 97.4 hectares. Traditionally, plant growing is developed mainly in the northern areas of the republic, while livestock breeding prevails in the south. Half of all registered livestock in Kazakhstan belongs to three regions - Turkestan, Zhambyl and Almaty. In August 2021, there were 20.3 million sheep, 9.8 million cattle and more than 3.3 million horses in the republic. The problematic issue is the wear and tear of agricultural machinery. Even though in recent years the process of fleet renewal has been activated, the age of half of the tractors is at least 29 years old, and 61% of the used trailers and attachments were produced back in the 1980-s year (Analytical Digest, 2021; Bureau of National Statistics, 2023).

## **5.2. Disclosure of the concept of public-private partnership in Canada**

Today, there are many definitions and interpretations of the term public-private partnership. Social and economic projects in healthcare, education, science, housing and communal services, innovative technologies, transport, culture, sports, and in a small part, agriculture and tourism can be attributed to public-private partnerships.

A public-private partnership is understood as a long-term pooling of resources of public and private partners based on a written agreement, fixing the sharing of risks, responsibilities and results between them to solve critical public tasks and/or implement infrastructure projects in the public interest that cannot be effectively resolved/implemented without the participation of private partners.

To study foreign experience in the implementation of public-private partnership, Canada was chosen, which, using the PPP model, was able to attract significant private funds, technologies and innovations to the infrastructure, and thereby increase its competitiveness, despite the mistakes made in using the PPP model for several projects, which is also of interest from the point of view of their possible consideration in the development of PPP in Kazakhstan.

Using various forms of public-private partnership in industrial and social infrastructure sectors is one of the main trends in the modern development of the Canadian economy. As in other developed market countries and some transition economies, PPP mechanisms have been used in Canada since the early 1990-s.

Canada's experience in implementing PPPs interests us for several reasons. First of all, this is some similarity in both countries' natural-geographical characteristics and economic structure, as well as the wealth and diversity of natural resources and an increased share of raw materials industries in the structure of production and exports. Related to this is the state's active and often direct participation in creating and modernising the economic and social infrastructure (Canada's Economic Action Plan, 2010).

Other circumstances add additional value to the Canadian experience. Thus, Canada is characterised by a pragmatic approach to studying and applying the "best examples" of foreign economic practice. This is facilitated, in particular, by the traditionally significant role of immigration in forming the population and the high degree of "openness" of the economy for foreign economic relations.

According to international experts, Canada occupies some "middle" positions regarding the level of use of PPP mechanisms and the scale of their implementation in economic practice. The leaders in this - in terms of institutional conditions, the development of project management mechanisms, the development of various industry models, and a wide range of funding sources - are recognised by the UK and Australia. In Canada, as in a former colony of Great Britain, the imprint of British traditions and approaches is very clearly manifested in the state structure, party-political system and model of social policy. In the 1990s, the British experience of using new forms of economic partnership between the state and business was also carefully studied here. It is noteworthy, however, that, in the end, there were significant differences in some conceptual points (Canada's Economic Action Plan, 2010).

Notably, in Canada, "private finance initiative" schemes are practically not used, and a clear difference has been established between public-private partnerships and privatisation. In Canada, the complete transfer of a specific object, function and related assets to the private sector is considered privatisation (even if the control and regulation of this type of activity remain in the hands of the state) (Federation of Canadian Municipalities, 2010). Mechanisms of public-private partnership, of course, involve one degree or another of denationalisation. However, in PPP projects, the ownership of infrastructure facilities and services for collective use is usually retained by the state/municipalities or (more rarely) joint public-private. In Canada, PPP legislation does not

provide for the complete transfer of ownership by the state to private capital. At the same time, it is supposed to delegate to him the rights of use and possession of state property. In this regard, various forms of public-private partnership are also called partial privatisation (semi-privatisation).

The brief definition of such a partnership adopted in Canada is not enshrined in federal law but in the charter of the Canadian PPP Council. It is a nationwide organisation that was created and functions as a partnership. The main goal of the PPP Council is to improve and introduce new mechanisms for economic interaction, study and disseminate "best practice examples", and provide methodological assistance to participants in partner projects. The Council includes representatives of government agencies, many private companies in various industries, financial companies, and consulting firms. Organisations similar in composition and functions operate in several provinces of Canada - Ontario, British Columbia, Alberta, and Quebec. Canada places particular emphasis on the fact that partnerships are created to meet public needs most effectively. To this end, they rely on the strengths and advantages of both public and private partners (Fussell et al., 2009; Weng et al., 2017).

At the same time, in the late 1990s in Canada, various public-private partnership mechanisms began to rapidly develop and be used in the economic and social infrastructure sectors. In many infrastructure sectors and activities, the complete transfer of state/municipal property to private commercial structures is sometimes reasonable. It may be unacceptable from a socio-political point of view. In some regions, there have been cases of suspension of privatisation transactions or even the return to state control of some objects and functions previously transferred to private companies. As a result of the search for the optimal combination of public and private interests, the strengths and resources of the public and business sectors, and the division of financial and other risks between them, various partnerships began to be created. It should be emphasised once again that in Canada, economic, organisational and managerial functions in relation to state objects are transferred to a private partner to some extent. Still, these objects themselves remain the property of the state.

In the case of Canada, one can see how PPP projects can contribute to socio-economic development. Thus, according to the Canadian Center for Economic Analysis, each dollar invested in PPP projects in different provinces generated from 1.1 to 4.2 dollars of economic activity: the primary impact on the economy is the cost of the original contractor, the secondary effect is the cost of the suppliers of these contractors. The generated income in the form of wages and profits is spent on consumption and investment-induced impact, and, finally, new infrastructure facilities provide growth in economic activity that is not directly related to the initial investment - systemic influence. It is important to note that this process is accompanied by additional employment and, as a result, an increase in wages (from 0.5 to 1.9 dollars per 1 dollar of investment). Finally, additional investments in projects lead to additional tax revenues (from 0.4 to 1.1 dollars per 1 dollar of investment). At the same time, for sizeable long-term infrastructure projects (for example, roads), as practice shows, the additional taxes over the entire project cycle exceeds the investments. In addition to purely economic results, infrastructure projects lead to an increase in the quality of life and have a significant impact on socio-economic development and the level of country competitiveness, attracting better resources and additional capital to the country (Fussell et al., 2009; Canada's Economic Action Plan, 2010).

The impact of described effects of the implementation of PPP projects on PPP in Canada averaged \$3.6 per \$1 investment. Based on the contract value of the analysed two hundred large PPP projects (about \$110 billion), one can arrive at a total contribution to PPP of \$396 billion (about 24% of the level of PPP in 2016). This contribution would be less if the implemented projects were not linked (the average contribution of each project in isolation was \$2.4 per dollar of investment). By linking infrastructure plans, in addition to the direct effect, there is a synergistic effect, and thus, the impact of these investments on the economy increases (Canada's Economic Action Plan, 2010).

Canada's experience suggests that public-private partnerships have country specific and are determined by various conditions: the legal environment, the level of development of institutions, business traditions, economic development, political factors, and others. At the same time, certain similarities can be identified that indicate the presence of patterns in this area, which can improve state policy's effectiveness in attracting private investment in the public infrastructure sector.

An analysis of the development of PPP program management systems in Canada showed that it was a dynamic process, with many changes as experience gained. In Canada, there are three waves of PPP development: (1) an attempt to copy the English PFI model, (2) the introduction of the VfM mechanism and an assessment of the economic effect of each project, (3) the "Trudeau era". At the beginning of the development of PPP models, separate PPP Centers were created (both at the national level and in the regions), focused exclusively on projects implemented according to such models. In most cases, they were then integrated into government infrastructure development centres (in Canada, the Infrastructure Agency and the Infrastructure Bank, in the UK, Infrastructure and Project Management under the Treasury IPA, in France, the FIN INFRA Center in the Treasury) so that the PPP model was not seen as a fashionable phenomenon that took precedence over other forms of implementation of infrastructure projects, but as an alternative to conventional methods, used when there were economic advantages (Fussell et al., 2009).

The Canada PPP Fund has \$1.2 billion in funding and is a federal financial instrument to assist lower levels of public government in their PPP projects. They form a medium-term plan and budget for five years. Any government body can apply to the fund to support their transport, water supply, energy, security, waste management, culture, sports, telecommunications, maritime activities, space, and tourism projects. Projects are selected based on price and quality criteria. Financing comes in various forms depending on the needs of the project. The maximum amount of the fund's support is approximately 25% of the project cost. PPP projects in Canada are implemented in more than 25 areas of public relations (construction of roads and bridges, construction and reconstruction of medical and educational institutions, sports technical facilities, etc.) at all levels of government (Canada's Economic Action Plan, 2010).

The legal regulation of public-private partnerships in Canada is carried out at the federal level and the level of provinces and territories.

The main statutory act governing public-private partnerships at the federal level is the Canadian Strategic Infrastructure Fund Act of March 27, 2003, which establishes that the Strategic Infrastructure Fund, if necessary, facilitates partnerships between public and private organisations.

Thus, from the experience of Canada, the dynamics of the development of public-private partnerships in terms of the volume of attracted investments is cyclical and depends on economic and political factors. With the implementation of large projects, considering the reduction of the infrastructure gap, there has been a gradual decrease in activity in this area.

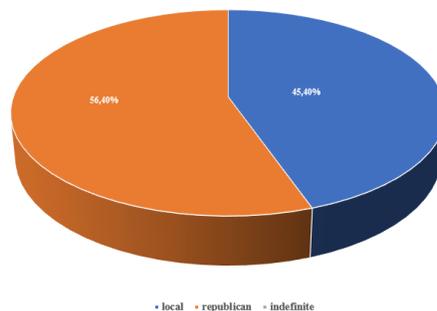
### **5.3. Analysis of the current state of public-private partnership in Kazakhstan**

The President of the Republic of Kazakhstan, Kassym-Jomart Tokayev, at a meeting of the Council of National Investors on June 28, 2019, indicated that it is necessary to better unlock the potential of public-private partnerships. The President noted that this tool was actively used in constructing social facilities - kindergartens, schools, and hospitals. It is necessary to attract investors to implement PPP projects in other sectors - infrastructure, energy, industry, and agriculture (JSC "Kazakhstan Public-Private Partnership Center", 2023).

In July 2006, a new (current) law “On Concessions” (Law of the Republic of Kazakhstan, 2006), was adopted to eliminate legislative restrictions and problems that arose with the implementation of PPP projects in Kazakhstan. First, it made it possible to involve legal entities registered in the Republic of Kazakhstan to implement concession projects. In the process of implementing the Law of the Republic of Kazakhstan "On Concessions", several barriers were identified that prevent its active application: weak commercial attractiveness of concession objects; limited instruments of state support for concessionaires; the need to strengthen the institutional component and the quality of the preparation of PPP projects. Therefore, to improve the PPP mechanism and the attractiveness of concession projects, on July 5, 2008, a law of the Republic of Kazakhstan was adopted, which made it possible to improve some provisions of the concession legislation. In July 2010, several amendments were made to the concession legislation of the Republic of Kazakhstan. The changes concerned the procedures for transferring objects to the concession and expanding state support measures. The turning point for developing PPP mechanisms in Kazakhstan was 2011 when the first policy document in the field of PPP for the period up to 2015 was adopted. On October 31, 2015, Kazakhstan adopted the Law "On Public-Private Partnership" (Law of the Republic of Kazakhstan, 2015) which is based on international experience in the implementation of PPP projects and includes a wide range of state support measures for infrastructure investors, including foreign ones.

Currently, the legislation of the Republic of Kazakhstan in the field of public-private partnership is based on the Constitution of the Republic of Kazakhstan. It consists of the Civil Code of the Republic of Kazakhstan, the Law "On Concessions", the Law "On Public-Private Partnership", and other regulatory legal acts of the Republic of Kazakhstan. Law of the Republic of Kazakhstan (RK) No. 167-III "On Concessions" was adopted on July 7, 2006. This is the first normative act regulating relations in the field of PPP. The concession is a PPP scheme, one of the most complex and capital-intensive social infrastructure and life support projects.

Law of the Republic of Kazakhstan No. 379-V "On public-private partnership" was adopted on October 31, 2015. The law is based on international experience in implementing public-private partnership projects and includes a wide range of state support measures for investors, including foreign ones. In general, a public-private partnership is a system of medium-term or long-term relationships between the state and the private sector for the provision by the private sector on behalf of the state of socially significant services for the design, financing, construction, reconstruction, rehabilitation, operation or maintenance of facilities. Public-private partnership is carried out in all sectors of the economy. With the adoption of the law "On Public-Private Partnership" in 2015, new types of contracts were introduced: BTO (build–operate–transfer), DBFO (design–build–finance–operate), O&M (operate–management), LC (lease contract) (Sundaram et al., 2016; Teterinets, 2019).



**Figure 4.** Level of PPP projects

At the local level, mainly less expensive projects for modernising housing and communal services and social projects are being implemented, while at the republican level - large infrastructure projects (Figure 4).

Between 2005 and May 2017, less than 50 PPP agreements and concessions were concluded, while already in the second half of 2017, the Treasury Committee registered 133 PPP projects. As we can see in Table 1, as of April 1, 2021, more than 872 projects have already been registered. Therefore, based on these figures alone, it can be concluded that for less than four years from the beginning of the registration of PPP contracts, 17 times more contracts were concluded than in the previous 11 years (Public-Private Partnership Monitor, 2022; Public-Private Partnerships in the countries of Eurasia Economic Union, 2018).

**Table 1.** Number of registered PPP projects and concessions as of 01.04.2021

2016		2017		2018		2019		2020		2021	
FA	RK	FA	RK	FA	RK	FA	RK	FA	RK	FA	RK
		39		12		90		29		63	
total		total		total		total		total		total	
7		140		184		376		139		34	
Incl. registered per year		Incl. registered per year		Incl. registered per year		Incl. registered per year		Incl. registered per year		Incl. registered per year	
7		140		184		376		139		34	
Note: Compiled by the authors based on information from the "Summary of information on the assumed state obligations under PPP projects and concessions of the Government of the Republic of Kazakhstan and the LEA (forms No. 3 and No. 4)/IAIS "e-Minfin", subsystem "Execution of the state government in terms of state borrowing and lending" (Materials of the extended meeting of the government, 2017)											

The current situation in the development of public-private partnership looks like this, 34 projects in PPP are at different stages of implementation, including agreements on 27 projects have been concluded: six projects in healthcare, two projects in roads, one project in veterinary medicine, 13 in education, and five projects in agriculture (JSC “Kazakhstan Public-Private Partnership Center”, 2023).

**Discussion**

Kazakhstan has some experience in applying PPP mechanisms. The main areas of application of PPP mechanisms in Kazakhstan today are energy, transport infrastructure, and construction. At first, the imperfection of legislation was one of the main obstacles that prevented the active attraction of private investment and competencies in the infrastructure sectors of the economy of Kazakhstan. The first law of the Republic of Kazakhstan (RK), "On Concessions", approved in December 1991, regulated the legal conditions for granting objects for concession in the republic's territory only to foreign investors.

In connection with the strategy of sustainable development of Kazakhstan, the development of public-private partnerships is particularly important. Regional authorities interact with businesses based on the optimal distribution of responsibilities, risks and benefits. This is a qualitatively new and effective way to attract investment since partnerships of this type can promote economic growth and develop socially significant infrastructure.

The main tasks of public-private partnership:

- creation of conditions for effective interaction between the public partner and the private partner to ensure sustainable socio-economic development of the Republic of Kazakhstan;
- attraction of investments in the state economy by combining the resources of the state partner and the private partner for the development of infrastructure and life support systems for the population;

- increasing the level of availability and quality of goods, works and services, taking into account the interests and needs of the population, as well as other interested parties;
- increasing the overall innovation activity in the Republic of Kazakhstan, including promoting the development of high-tech and knowledge-intensive industries (Rudert & Mussayeva, 2020; Tireuov et al., 2023).

One of the most common problems in Kazakhstan is the need for more innovative projects. When organising special economic zones at the initial stage, there is intense competition between regions to create special economic zones on their territory. The consequence of choosing a territory and assigning it the status of a special economic zone is that in the future, there will be a relatively weak filling of these zones with private businesses with high financial potential. This is because residents already receive a significant part of the benefits, including taxes, provided for within the territorial framework of the special economic zone.

According to the Ministry of National Economy of the Republic of Kazakhstan, investment attractiveness through public-private partnerships has increased in recent years. This contributed to GDP growth of 0.2%. At the beginning of the second quarter of 2019, the total number of projects in the republic amounted to 1285, which is 2.9 trillion tenge. Five hundred forty-eight contracts for 1.5 trillion tenge have already been signed. At the preparatory stage, 737 projects worth 1.4 trillion tenge. Most projects relate to education, healthcare, energy, housing and communal services, culture and sports (Public-Private Partnership Monitor, 2022; Public-Private Partnership Units, 2007). Anyway, there is room for further strengthening of PPP (Taubayev et al., 2017; Domalatov & Turginbayeva, 2019).

## **Conclusions**

There are no ready-made recipes for ensuring growth in agriculture based on the interaction between the state and business. In each case, it is necessary to consider the characteristics of a particular territory, its resources, and development prospects. Experts identify several relevant areas of public-private partnership in the agro-industrial complex, which can be used individually and in combination with each other, depending on the specific conditions of the region.

Another factor in this matter is budgetary security as one of the critical drivers for developing PPPs - the higher it is, the less incentive the government has to attract private capital. On the other hand, the reduction in the use of the PPP model in the context of insufficient budgetary funds for public infrastructure development may indicate that systemic issues still need to be resolved, which should be paid special attention to.

Discussions about using public-private partnerships in the agro-industrial complex are based on our country's specifics and the high riskiness of agricultural production. The vital role and importance of PPP in the agro-industrial complex are noted in many governments' targeted programs and strategies for developing the industry. The PPP mechanism in agriculture can become the foremost influential factor and instrument for ensuring national food security.

A systematic approach at various levels of management of the PPP-AIC project is becoming essential for the practical implementation of the project. Taking into account the multi-level configuration of management structures in the Kazakhstani public sector, the central executive bodies regulating the activities of the agro-industrial complex within the framework of PPP-agro-industrial complex projects are directly responsible for developing their legal support and the decision-making mechanism for the PPP-agro-industrial complex project.

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