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## PUBLIC-PRIVATE PARTNERSHIP AS A MECHANISM FOR ATTRACTING INVESTMENT IN THE HOUSING AND COMMUNAL SPHERE

The purpose of the article is the selection and use of effective forms of public-private partnerships as a mechanism to attract investment in housing and communal sphere.

The object of the study is the sector of housing and communal services. The subject of the study is a set of organizational and economic relations arising in the process of public-private partnership in the field of housing and communal services.

In solving the problems of the study there were used dialectical methods (analysis and synthesis, detailing and generalization, analogy, and modeling), as well as economic and statistical methods, methods of expert evaluations, observation.

The article considers public-private partnership as a tool to attract investment in the sector of housing and communal services. The features of forms of public-private partnerships, as well as the benefits and risks for local governments and private businesses in housing and communal services. It was found that the use of effective forms of public-private partnerships will reduce the risks of investment private business and improve the level and quality of service of public utilities.

The authors propose the use of effective forms of public-private partnership, which will reduce the risks of private business investment and improve the level and quality of public services in the housing and utilities sector.

**Keywords:** housing and communal services, public-private partnership, partnership relations, private business, budgetary subsidies.

### 1. INTRODUCTION

The use of public-private partnership (PPP) tools in the sectors of public utilities is aimed at attracting extra-budgetary and off-budget financing from private investors in conditions of economic crisis. There are various forms of interaction between public authorities and business in the utilities sector (concession agreement, lease with investment obligations, privatization-investment model of cooperation), which have their own features

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and risks. Constant expectation of budgetary funds when repair of old and construction of new facilities in the public utilities sector has resulted in the lack of change in this sector.

There have been virtually no major modernization and reconstruction projects with private funds in the utilities sector in recent years. Investments in infrastructure were mainly limited to budgetary sources and were carried out within the framework of target programs or investment programs of organizations of communal complex at the expense of the tariff policy. In modern conditions the actual problem is the attraction of financial resources to solve complex problems of functioning and development of the communal system, stimulation of investments into modernization of infrastructure. This problem can also be solved with partnerships between the private and public sectors. The necessity of development of partnership relations in the market of housing and communal services (HCS) is caused by factors at the macro-, micro- and meso-levels of economic processes. Using partnerships, the states seek to accelerate economic growth and achieve higher productivity and efficiency of the economy based on private property. The economic effect for society is to obtain better services at minimal cost. The main purpose of public-private partnerships is to expand the space for free movement of factors of production, such as the penetration of capital into areas previously inaccessible to it.

Public-private partnership is an institutional and organizational alliance between the state and private business to implement projects in various spheres of activity, including the provision of public services. Using partnerships, the state performs one of its most important functions associated with the formation of the institutional environment.

Public-private partnership is used for realization of other purposes: to solve financial problems, as the mechanism of increase of competitiveness in the market of private investments and the tool of public administration; for introduction of principles of corporate social responsibility; connections of successfully developing regional centers to improve ability to develop; as a way of modernization of infrastructure; for improvement of quality of the public sector.

Modern forms of public-private partnerships are related to the processes of restructuring of national economies and represent indirect privatization, as opposed to franchising and privatization. Partnerships lead to the transfer to private business of part of the economic, organizational, and managerial functions about state-owned facilities (Amunts, 2020).

The purpose of the article is the selection and use of effective forms of public-private partnerships as a mechanism to attract investment in housing and communal sphere.

Theoretical and methodological basis of the study were the scientific works of domestic and foreign scientists devoted to the theory, methodology and practice of public-private partnership forms of housing and communal services. In solving the problems of the study were used dialectical methods (analysis and synthesis, detailing and generalization, analogy, and modeling), as well as economic and statistical methods, methods of expert evaluations, observation.

## **2. STATEMENT OF THE PROBLEM**

In modern scientific literature the study of models and forms of public-private partnerships in housing and communal sphere are devoted to the works of such Ukrainian and foreign scholars as L.V. Bezzubko, Bon-Gang Hwang, Xianbo Zhao, Mindy Jiang Shu Gay, E.V. Dolgalova, P. Drucker, M. Grossmann, N.D. Zakorin, H. Ioshihara, A. Kleiman, P.V. Magdanov, M. Melnik, D. Mercer, G. Minzberg, T. Peters, A.G. Porshnev, B.A.

Reizberg, A. Svirina, A.J. Strinkland, Z.M. Tetueva, F. Taylor, A. Thompson, R. Waterman, G. Ford, G. Emerson, S. Young, M. Yeshchenko, T. Faselko, I. Udovychenko.

However, even though a significant number of scientific works are devoted to the theoretical foundations of the forms of public-private partnership, the study of them revealed the lack of validity of partnership models in the sphere of housing and communal services. There are not enough works that consider public-private partnership as a tool to attract investment in the sector of housing and communal services. The solution of these problems is of scientific interest, needs further theoretical and methodological justification, as well as practical implementation in relation to the current stage of development of organizational and economic relations in the sphere of housing and communal services in Ukraine, which makes the difference of scientific research of the author of this article from the research conducted earlier in this subject area.

### 3. MAIN RESULTS

If we assess the prospects for the next few years, considering the current socio-economic situation, we should talk about the need to change the concept of functioning of the sector of public infrastructure. Regional and local authorities should move from the expectation of budget money to the formation of sustainable structures (forms) of public-private partnership. Both parties must be interested in the formation of stable forms of interaction between private business and public authorities in the utilities sphere. The public authorities (local self-government bodies) have a legally established duty to provide the population residing in the respective territory with communal services of proper quality. There are two main ways of organizing the process of providing utility services to consumers:

1. traditional (“non-market”);
2. “Market” based on the use of various forms of public-private partnership.

The traditional way of organizing the provision of municipal services to the population consists in the establishment by the municipality of a municipal unitary enterprise based on the right of economic management, providing it with appropriate property, setting tariffs by the municipality itself and control over its financial and economic activities. This model contains the following negative aspects. Attention should be paid to the fact that municipalities combine the functions of regulating the provision of public services to the population and its implementation. Municipalities have considerable authority to regulate the tariffs of public utility companies and at the same time they are operators of the public utility infrastructure, since they give the municipal unitary enterprise accountable to them the property and control its activities.

As a result, the municipal unitary enterprise, acting in fact as a subdivision of the municipality, is not and cannot be interested in optimizing costs for the maintenance of utility infrastructure and improving the quality of public services to the population. Municipal unitary enterprises use the costliest method of regulating utility tariffs – increasing the costs of repairing utility networks, using them as a criterion of effectiveness of their work. This method does not affect the quality of public services rendered by such an enterprise. Uninterested municipal unitary enterprise as a commercial organization in the efficiency of its financial and economic activities leads to regular subsidies from the local or regional budget while maintaining the growth rate of utility tariffs at or above the industry average and with no qualitative improvements in the provision of socially important services to the population (Tetueva, 2021).

According to the authors of the article, the way to minimize the relevant risks and optimize the financial and economic activities of public utility system operators is the introduction of forms of public-private partnership in the sphere of public infrastructure, the inclusion of real and legal market mechanisms of interest of the municipality, the operator, and consumers in improving the quality of public services. The main advantage of forms of public-private partnership is the existing potential and experience in attracting private investment in the reconstruction, modernization, and development of public utilities infrastructure, which must be guaranteed by the legal and organizational sustainability of such forms. The existing legislation allows the implementation of the public-private partnership considering the tariff regulation and the specifics of the utilities sector.

Private investors are interested in including objects of communal infrastructure in their business because it means stability of their activity and possibility to receive a small but guaranteed income for a long period of time on condition of competent structuring and qualified management of investments. The duration of the period of guaranteed income allows for the implementation of quite significant investment programs in the utilities sector, attracting for this purpose both public financing on a non-repayable basis and credit resources of financial development institutions.

International and domestic experience accumulated over the past 15–20 years shows that one of the main mechanisms for expanding the resource base and mobilizing untapped reserves for economic development and improving the efficiency of state and municipal property management is public-private partnership. Such partnership is a relatively new phenomenon in the world economy, reflecting the processes of expansion and complication of forms of interaction between the state and business. Critical level of wear and tear of engineering communications (systems of heat supply, water supply and water disposal), reaching on average 60% level, requires significant capital investments in reconstruction and modernization of fixed assets. The depreciation of the production and infrastructure objects of the housing and communal sphere is the following: depreciation of the boiler houses – 54,5 %, water supply and sewage systems – 65,3%, heat supply systems – 62,8%, electric power networks – 58,1%, water pumping stations – 57,1%, sewage pumping stations – 57,1%, water sewage treatment plants – 53,9%, sewage treatment plants – 56,2%. About 40% of the equipment in the municipal complex was manufactured 20 years ago.

The need for investment resources for complete reconstruction of the housing stock and communal infrastructure is growing every year. This volume of investments cannot be taken only at the expense of budgetary funds, so the priority in the housing and communal sphere is formation of attractiveness of the sector by creating conditions for attracting funds from non-budgetary sources (Antonov, Bradul, Slavenko, 2020).

For a long period of time, the main reserves of financing of capital investments in the utilities sector could be either internal (own) sources of enterprises (profits, depreciation charges) or budgetary funds. In the housing sector there is no tool to restore the physical deterioration of fixed assets (housing stock) at all because the existing norms do not provide for depreciation accrual for the restoration of housing stock. Considering depreciation deductions as the main internal source of capital investments of utility enterprises, some negative factors should be highlighted. Firstly, depreciation costs deducted according to the existing norms do not correspond at all to the scale of actual physical depreciation of fixed assets. Secondly, utilities in the 1990s often had to use depreciation deductions as working capital for timely settlements with major creditors – big energy monopolists.

The practice of long-term lending is virtually non-existent in the housing and utilities sector. Private investment is developing at a slow pace and does not meet the expectations

of public authorities, as socio-economic, technological, political, and legal problems hinder it. Most of the providers of public utilities operate in the form of municipal unitary enterprises. One of the main problems in the sphere of housing and utilities is, on the one hand, the lack of interest of economic entities in improving efficiency, on the other hand, the presence of significant opportunities for abuse of economic freedom granted to them by the owner (municipality). In this case “economic freedom can be used not in the interests of the owner and not even in the interests of the organization itself”.

The disadvantages of municipal unitary enterprises carrying out their activities in the sphere of housing and communal services are: disinterest in achieving positive results of financial activity; low level of responsibility of enterprises to the owner for the consequences of their decisions, safety and effective use of the property transferred to the economic management or operational management; inefficiency of financial management, including production costs; lack of security of the enterprise as a single property complex; lack of a long-term and medium-term strategy in the activities of the enterprise, focus on short-term results; absence of reliable information on the financial and economic condition of the enterprise among the interested parties (Hayrapetyan, 2020).

In this regard, the state in general and each municipality in particular faces the task of reorganization and liquidation of unitary enterprises and the creation of effective market mechanisms for the management of housing and communal sphere. The solution of this task should involve the development of competitiveness and involvement of the private sector in this sphere. Public-private partnerships are inherently partnerships between the private sector and municipalities for more efficient provision of public infrastructure systems, as well as construction, operation, and reconstruction of facilities.

Public-private partnerships mean not only involving the private sector in the financing of investment projects whose payback will be based on revenues generated by the operation of utility infrastructure, but also leveraging private sector expertise and management experience to manage utility systems more efficiently than before over the long term. Important elements of a private company's activities in the housing and utilities sector include:

1. The freedom to improve efficiency and reduce costs to increase profitability and generate funds to finance capital investments.
2. Ensuring the efficiency of capital investment in infrastructure facilities.
3. The freedom to set tariffs at a competitive level that provides a level of revenue sufficient to cover costs and generate profits to the extent that new capital investment can be made.
4. The freedom to interact directly with their consumers (Boldyreva, 2019).

Currently, the Ukrainian conditions of housing and communal services do not meet any of these elements. The private sector in this situation will act as a prerequisite to solve these problems. Organizational peculiarities in terms of public-private partnership will depend on the chosen form of PPP. In world practice several forms of public-private partnership are distinguished: service contract (outsourcing); contract of management; contract of leasing; concession agreements, including agreements, which are traditionally called WOT (build, operate, transfer) and VOOT (build, own, operate, transfer); full privatization, including a SOT-type contract (Rodionov, 2017).

It is obvious that housing and communal services is a sphere, which requires enormous investments. As one of the most important mechanisms of attracting private capital and optimizing budget expenditures for solving social and economic problems, they consider public-private partnership – a sort of symbiosis between the state and business.

Public-private partnership in housing and communal services we are interested in as cooperation of state bodies or local authorities and persons authorized by them and private sector to implement projects in the field of housing and communal services related to the provision of housing and communal services to consumers. In addition, it is not just a combination of state and business resources, such as finances, property, professional experience, effective management, each of the parties in the partnership has its own objectives, solves specific problems, in particular: the government's goal is to improve the quality of services provided to consumers; the goal of the private sector is to obtain a stable profit. Table 1 presents the main mechanisms of partnerships, common in world practice.

Table 1. The main partnership mechanisms, common in the world practice

<b>Title</b>	<b>Summary</b>	<b>Description</b>
BOT	Build, Operate, Transfer	Construction of the facility on a turnkey basis, comprehensive management of the object for a period long enough to recoup the funds invested. At the end of the term the object is returned to the state.
BOOT	Build, Own, Operate, Transfer	The private partner not only uses but also owns the property during the term of the agreement, at the end of which the property is transferred to the state.
BTO	Build, Transfer, Operate	The object is transferred to the state immediately upon completion of construction, after acceptance by the state the object is transferred to the private partner, but without transfer of ownership.
BOO	Build, Own, Operate	After the expiration of the agreement, the created object is not transferred to the public authorities but remains at the disposal of the investor and continues to operate on a commercial basis.
BOMT	Build, Operate, Maintain, Transfer	The private partner is responsible for the maintenance and upkeep of the facilities it constructs.
DBOOT	Design, Build, Own, Operate, Transfer	The private partner is responsible not only for the construction of the facility, but also for its design.
DBFO	Design, Build, Finance, Operate	The private partner is responsible for the design, with special mention of his responsibility for financing the construction of the facility.

Source: personal contribution of the authors.

Attracting funds from private investors in the housing and communal sphere will help to solve many socially important problems. And even though there is a tendency of growth of private investments in the total volume of investments in modernization of communal infrastructure, their inflow is not enough yet. The experience of public-private partnership, formed in Ukraine in recent years in the housing and communal sector is not very diverse.

Constantly changing legal framework, as well as the use of international practice of public-private partnership, allow us to distinguish three basic forms of public-private

partnership applicable in the utilities sector: the lease model; privatization-investment scheme; concession agreement. These forms are a way of structuring private business in the sphere of providing public services to the population. The structuring and administration of the corresponding mechanisms of public-private partnership make it possible to facilitate the attraction of external financing both on a non-repayable basis (budget subsidies received in one form or another) and on a repayable basis (loans from financial institutions of development).

*The lease in its traditional form* is the most popular model of public-private partnership in the utilities sector. The peculiarity of lease relations between the state and private business is that state or municipal property is transferred to the private partner for temporary use for a certain fee. Lease contracts presuppose the return of the object of contractual relations, the right of disposal of property is not transferred to the private partner. In the case of a leasing agreement, the lessee always has the right to redeem the state or municipal property (Pacific Private Sector Development Initiative, [http](http://)).

The greatest problem in concluding long-term leases is the lack of state registration of ownership of immovable property. The risk associated with the registration of rights to real estate is one of the risks of the lease model of public-private partnership. Thus, the risks of the lease model can include the risks of bidding, consisting in the possible loss of the private operator when participating in the bidding and the risks of the lessor arising from the need to develop auction documentation. Significant risks for the lessee are the necessity to obtain respective permits related to provision of housing and communal services, search for maintenance staff, renegotiation of contracts for provision of housing and communal services with consumers, availability of the approved tariff for the services provided.

In addition, certain risks are associated with the cost of repairing the property. All rent from the property goes to own revenues of the budget of the municipality, and it is not possible to allocate from it the funds needed to maintain this property in working order, even though these funds are included in the rent. All expenditures from the budget, including for the repair of leased property, can be made only by placing a public order under the bidding procedure. There is no guarantee that the tenant of the property, who is responsible for its condition and, accordingly, the quality of housing and communal services, will win the auction. Moreover, the tenant in this case does not have the tools to control the quality of repair work.

The same problems may arise when the municipality invests additional funds in the leased property. Even though the rental model of public-private partnership is the most popular, it is far from being perfect. The main legal risks of the lease model of public-private partnership are as follows: risks of registration of rights to immovable property; the risks of tendering; risks of licensing, personnel search, registration of sales functions, approval of tariff regulation; the risks of property accounting and contract qualification; the risks of lease payment; risks of bankruptcy and liquidation of the municipal unitary enterprise.

Perhaps the most unpopular model of public-private partnership in Ukraine is corporatization of property *complexes of unitary enterprises*. The main essence of corporatization is that a municipal enterprise, undergoing the procedure of reorganization, is transformed into an open joint stock company, and all the property to be transferred as part of the property complex of the enterprise ceases to be municipal property, and is transferred to the ownership of the joint stock company created because of the reorganization. In return, the municipality receives shares in the joint stock company in an amount corresponding to the share of the value of the transferred property in the authorized

capital. The first thing that causes a negative attitude of local self-governments to this method is the fear of losing control over the organization of housing and communal services. The second is the complexity and costliness of the procedure of corporatization itself. Shares of housing and communal services companies can be transferred to trust management. Both the property and the entire enterprise as a single complex can be transferred into trust management (Bon-Gang Hwang, Xianbo Zhao, Mindy Jiang Shu Gay, 2020).

*Trust management* as one of the forms of public-private partnership also has its strong points – transparency of managing structures for municipal authorities, directly responsible to residents for quality of housing and communal services, and weak points – poorly developed legal framework. In the case of trust management, fixed assets are not sold, and local authorities can influence private companies and even break relations with the management company in case it does not fulfill any conditions. Currently, the forms of public-private partnership: trust management and concession are used insufficiently.

The development of public-private partnership in the sphere of housing and communal services faces obstacles of both objective and subjective nature, among which are the following: lack of a strategy for the gradual introduction and use of public-private partnership models in the housing and utilities sector; imperfection of the legislation regulating individual types of public-private partnership; bureaucratism of the state institutions; underdevelopment of the banking system; significant transactional costs; lack of qualified specialists in the field of public-private partnership, etc.

Privatization-investment form of public-private partnership in the field of public infrastructure is one of the longest, considering the two-stage nature of its implementation. At the same time, it is the most stable, which is due to the presence of significant administrative and judicial experience of its application. In this form, the operation of public infrastructure systems is carried out by municipal unitary enterprises, whose privatization is possible only in the form of their transformation into open joint stock companies.

The positive sides of the model should include the absence of many risks of the rental form of management. Risks of tariff regulation arise from the direct legislative prohibition on the establishment and maintenance of tariffs by agreement between business and government. But the risks of registration of rights to immovable property, as well as the risks associated with conducting a tender and participation in it, are like those arising in the lease scheme. Each of these forms has its own peculiarities for the housing and utilities sphere (Table 2).

Based on the analysis of Table 2, we can conclude that modern forms of public-private partnerships are associated with the processes of restructuring of national economies and represent indirect privatization, as opposed to franchising and privatization. Partnerships lead to the transfer to private business of part of economic, organizational, and managerial functions about state-owned facilities. The goals pursued by each party are also different. The goal of local government bodies when concluding a contract with a private operator is to maximize social and economic benefits from the implementation of a project while minimizing budgetary investments. The private sector aims to maximize its income, as well as to increase the profitability of invested capital. High level of risks and low solvency of household consumers in low-income countries leads to reduction of investments in housing and communal sphere by international operators and investors. There are also advantages and risks of public-private partnerships for local governments and private businesses.



Table 2. Features of forms of public-private partnerships in the housing and communal sphere

Form of PPP	Facility management	Asset Owner	Advantages	Disadvantages
Service contract (outsourcing)	Owner of the facilities	Bodies of local government	Organization of competitive bidding for certain types of work, which allows to significantly reduce costs. Possibility to attract firms with the best employees to perform individual works.	Does not provide improvement in management activities. Preservation of owner's responsibility for regulatory compliance, capital investment and working capital, preservation of responsibility for commercial risks.
Lease contract	Private operator	Bodies of local government	The public sector's retention of ownership of facilities, control over the infrastructure and the pace of its development. Responsibility of the private sector for working capital and acceptance of commercial risks associated with activities.	Financing by the public sector capital investments. The need for accurate assessment of the condition of fixed assets, leased, and the system of quality control of services provided.
Concession agreement	Private operator	Bodies of local government	Much of the responsibility for meeting regulatory requirements is shifted to the private sector. The concessionaire has maximum incentives to provide services efficiently and economically. The public sector retains ownership of facilities, control over the infrastructure and the pace of its development, as well as reduced capital investment obligations.	The need for a strong and effective legal framework. The need for an accurate assessment of the condition of fixed assets transferred under the concession agreement. The likelihood of the concessionaire requiring the inclusion of the possibility that a concessionaire may require that a minimum condition be included in a contract on the need for compulsory acceptance of works (services) or payment of penalties.
Management contract	Private operator	Bodies of local government	Introduction of modern management systems and methods. Improving the professional level of management personnel.	The planning and financing of capital investments and current expenditures, as well as the overall responsibility for meeting regulatory requirements, remain with the public sector.

Source: personal contribution of the authors.

Table 3 presents the advantages and risks of PPP for local governments and private business in the housing and communal sphere.

Table 3. Features Advantages and risks of PPP for local governments and private businesses in the housing and utilities sector

Advantages and risks	Bodies of local government		Private business	
	Advantages	Risks	Advantages	Risks
Financial	Reducing the burden on the budget. Real estimation of the cost of projects. Obtaining additional revenues in the effective functioning of the private operator.	The risk of withdrawal of monopoly rents by private companies, focused primarily on profits.	Availability of a large, stable, and predictable market for the sale of services. Ensuring a profitability above the market level when introducing resource-saving projects.	Low solvency consumers, which determines their high sensitivity to changes in the level of tariffs. Bankruptcy risk, caused by significant technological risks.
Socio-economic	Improving the condition of public infrastructure owned by local governments. Improving the quality of services provided by the private sector.	The risk of financial inaccessibility of services for certain segments of the population. The risk of loss of consumer confidence in case of bankruptcy of the private operator.	–	–
Political	Ability to retain a central role in determining the strategy for the development of public infrastructure and customer service objectives.	Lack of transparency in government-business relations and, as a result, distrust of consumers-voters.	–	Manipulation of local governments. Lack of transparency in government-business relations and, as a result, distrust of consumers-payers.

Source: personal contribution of the authors.

Based on the analysis of Table 3, we can conclude that both the service contract and the management contract leave the government with more risks than it bears today under the unitary enterprise model. There is absolutely no need for the government to take on new risks. To successfully use PPPs in the housing and utility market the following conditions must be ensured: an appropriate legal framework; simple and transparent procedures; a shared structure for distributing risks and benefits; social and commercial benefits of projects; special attention should be paid to the expected revenue stream; the public sector should be the project initiator.

Concession is a more acceptable form of contract in which the contractor (or concessionaire) is responsible for the capital investment. Concessionaires rarely finance capital investments with their own funds, preferring to borrow capital for this purpose in the form of bank loans. Companies with a long history of success in concessions usually have high credit ratings and can borrow at lower interest rates than those without a credit history. Usually, the concessionaire repays the loan principal and interest over a period of, for example, 20 years, during which time the concession makes a small profit. During the last five years, he makes a large profit, which makes the entire concession financially attractive. Thus, the duration of the concession contract is of great importance to the concessionaire:

The tariffs at which consumers pay for services under the concession include maintenance costs, operating costs, loan repayments to finance capital investments, and profits. The economic efficiency of a concession contract for each party can be defined at scale by the presence of two conditions:

- increased profits and lower operating costs, which in their entirety will provide savings more than the concessionaire's rate of return, allowing rates to be set at a lower level than would have been possible without the concession;
- borrowing funds to finance capital investments at a lower interest rate than would have been the case if the utility itself had acted as the borrower.
- The following principles should guide the division of risks among the participants in public-private partnerships:
- the risk assumed must be covered, i.e., the amount of risk assumed by the partner must be equal to the benefit derived from the project;
- the risk should be covered by whoever can cover it at the lowest cost (Jui-Sheng Chou, Dinar Pramudawardhani, 2019).

The risks of licensing, staff recruitment, and tariff regulation in this scheme are like those described in the lease model since the private operator needs to create a new legal entity. The authors believe that the way to minimize these risks could be the introduction of a "transition period" between the signing of the concession agreement and the start of operating activities by the concessionaire. The period should end when the concessionaire has: the necessary licenses and permits; service personnel; concluded contracts with service consumers; an approved tariff.

The concession agreement provides the parties with an opportunity of contractual regulation of the procedure and conditions for establishment and change of tariffs and tariff surcharges in carrying out the activities stipulated by the concession agreement. This is most relevant in the communal sphere, although the law itself provides for certain restrictions on its use. The use of any of the models discussed in this article can be an effective way of attracting investment, external to both the municipality or subject of the state and the private operator of public utility systems (Osei-Kyei, Chan, 2018).

The implementation of these measures requires, above all, the interest of public authorities at various levels. It should be borne in mind that the efforts of public authorities alone are clearly not enough, it is required to have a mutual understanding with private investors – potential operators. It is necessary to widely implement the experience of already realized projects, to attract qualified consultants. This, in turn, will require wider coverage of problems and proposals for their solution, even if controversial, reorganization of the system of training of specialists in the relevant profile and taking several other measures.

#### 4. CONCLUSIONS

Analyzing the possible correlation of all possible regulators (market and state) in housing and communal sphere of Ukraine, it may be stated that today the most large-scale model is the following: availability of public ownership, for example, of water supply, sewage, heating supply systems and private management of these systems. Such concept allows to develop competition in the market under conditions of natural monopoly in the housing and communal sphere.

To implement forms of public-private partnership in housing and communal sector, it is important interest in it, first, of public authorities, the incentive for which must be to save budgetary funds. In general, the use of instruments of public-private partnership in housing and communal sphere will provide not only a significant inflow of investments in the industry, but also the growth of the entire regional economy.

Reforming of such components of housing and communal mechanism as pricing, financing and management determines the sustainable state of this sphere. Change of this environment in the housing and communal sphere consisting in introduction of new organizational-legal forms of management and functioning can make this sphere more attractive for investments, create more favorable conditions for transfer of housing and communal services to self-sufficiency. For the effective introduction and functioning of management companies based on concession relations in the industry, it is necessary to provide appropriate legislative, regulatory and methodological support.

To implement effective forms of public-private partnership in the utilities sector, the interest of public authorities of the appropriate level and their willingness to initiate actions to create an investment scheme and regulatory environment and to attract potential investors is primarily required. The responsibility for preliminary work on attracting a potential investor (adoption of legal acts, development of tender documentation) lies entirely on the side of the authorities, although there are mechanisms for distribution of relevant risks between the public and private partners.

The abovementioned risks of implementation of the presented forms of public-private partnership in the utilities sector are not comparable with the risks of lack of investment in this sector in the coming years. The difficult economic situation in the country does not absolve either regional or local authorities of their responsibility for the functioning of life support systems. If there is a mutual understanding between the public authorities and private investors, the tools of public-private partnership should help maintain and increase the pace of reconstruction and modernization of public infrastructure systems, even in crisis conditions.

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