THE WAYS TO INCREASE THE EFFICIENCY OF FUNDING OF HOUSING AND MUNICIPAL INFRASTRUCTURE IN UKRAINE


Abstract
Introduction. The proper functioning of housing and communal services as the part of social and community complex of social infrastructure provides general living and working conditions for Ukrainian population. The involvement of alternative financial resources is the main task for optimizing current operations of communal infrastructure and providing its development.

Purpose. The aim of the article is to identify the alternative methods of the development of the housing and community infrastructure.

Method (methodology). For getting relevant results we have used general scientific and special methods: historical method; method of scientific abstraction; methods of analysis and synthesis; induction and deduction; comparison method; methods of grouping and systematization.

Result. The article deals with the importance of housing and community infrastructure of Ukraine and the problems of its investment through the budget costs and self-financing: the inefficient use of the available methods of the communal sphere investment by local authorities, general macroeconomic factors and structural barriers that slow down the pace of the self-financing system of the communal enterprises.

As a result of the investigation, the resource base which is used in the world practice is identified including various forms of attracting financial resources of the private sector for the development of housing and community infrastructure. The general possibilities of the project investment usage for the development of the industry and a concrete example of the foreign experience of the concession usage in the area of water supply have been investigated. The structure of the financial resources and financial objects that may be involved in the implementation of investment projects and is a prerequisite for the development for housing and community infrastructure has been determined.

Keywords: communal infrastructure; government funding; project investment; financial resources of development; Public Private Partnership; concessions.

© Maria Yuriyivna Trofymenko, 2014
спеціальні методи: історичний метод (для вивчення процесу формування тенерівньої системи фінансування житлово-комунального комплексу); метод наукового абстрагування (узагальнення визначень та поглядів на роль житлово-комунального господарства); методи аналізу і синтезу (для дослідження можливих джерел залучення фінансових ресурсів); індукції та дедукції (для вивчення шляхів розвитку фінансування комунальної інфраструктури); метод порівняння (з метою визначення напрямків залучення та використання іноземного досвіду); методи групування та систематизації (для класифікації фінансових ресурсів).

Результати. У статті розглянуто важливість розвитку житлово-комунальної інфраструктури України та проблеми її фінансування за рахунок бюджетних коштів і самофінансування: неефективність використання місцевою владою доступних методів фінансування комунальної сфери, загальні макроекономічні фактори та структурні перепони, що співвідносять темпи розвитку системи самофінансування комунальних підприємств.

У результаті дослідження визначено ресурсну базу, яка використовується у світовій практиці, зокрема різноманітні форми залучення фінансових ресурсів приватного сектору для розвитку комунальної інфраструктури. Розглянуто загальні можливості використання проектного фінансування для розвитку галузі та конкретний приклад зарубіжного досвіду використання концесій у сфері водопостачання. Визначено структуру джерел фінансових ресурсів та фінансових суб’єктів, які можуть залучитися до реалізації інвестиційних проектів та є передумовою розвитку житлово-комунальної інфраструктури.

Ключові слова: комунальна інфраструктура; бюджетне фінансування; проектне фінансування; фінансові ресурси розвитку; державно-приватне партнерство; концесії.

JEL classification: L99, O18, O19, R51

Formulation of the problem

A living standard of the citizens is one of the criteria for evaluating the effectiveness of economic and social policy. The problems of social area are clearly fixed and represented in the economic sphere. One of the most important questions which are necessary to solve in the priority order is an achievement of the irreversible and positive shifts in the growths of welfare. A significant role in the realization of this task plays a social policy. The activity of cultural – educational, scientific, recreational and social – community complexes of social infrastructure fundamentally affects the value and quality of the labor force. The human factor weight of the reproductive process in modern conditions puts forward the social policy at the level of the other directions of the government policy.

Providing the optimal housing and community and social living conditions of the population is a primary requirement for effective support of human activities in all life spheres. That’s housing and community facilities as a part of social – community complex of the social infrastructure that provides the creating of conventional conditions for life and work of the population and is also responsible for the delivery of the objects of economy sectors (water, gas, heat, electricity). In this manner the housing and community facilities system covers the manufacturers and consumers of housing and community services.

The current state of the housing and community facilities requires substantial investments that are not capable of self – financing of industry or budgets. The involvement of the private sector with the aim to invest the housing and community facilities are widespread in the most developed countries through efficiency and wide choice of the possible forms of delegated management and concessions, but are not widely used in Ukraine. It is important to investigate the possibility of communal infrastructure investment by attracting private and foreign investors as well as international lending institutions.

Research of latest publications

The sources and forms of financing, the opportunities to attract private and international investments, improvement of the management of housing and community area are investigated by many scientists: H. Volynsky, A. Efimenko, T. Kachala, Y. Petrushkivsky, O. Omelianenko, L. Gubanova, O. Melnichenko, O. Lukyanchenko, Y. Katasonov, D. Moroz, B. Torkatyuk, E. Gayko, V. Dimchenko, E. Karlova and many others.

The main material

The components of social and community complex are housing and community facilities, public services, trade, public food, passenger transport and communication. Housing and community service is a fundamental element of the social infrastructure, which is designed to ensure normal functioning of all life – support systems of houses, hotels, companies and institutions.

The notion of housing and community facilities in Ukrainian sense has lost its relevance for European countries. Enterprises of this branch are combined under the term “communal infrastructure”, which expresses...
the structural identity of the utility sector to the social infrastructure of the country and extends beyond its value.

Diversified range of housing and community infrastructure includes housing and public utilities: water supply, drain, housing supply, gas, road maintenance and improvement, local electric and other services that provide services to the public, industrial and other consumers of all forms of ownership. In 1991 Ukraine held a majority of the object transfer of housing and community in private ownership. The task of ensuring their development in a particular area was assigned to local governments. At the present stage the finances of communal ownership companies is an integral part of local finances.

Being composed of local finance, finances of communal enterprises at the same time represent independent economic category which reflects economic relations associated with distribution and redistribution of the value of GDP achieved by the use of centralized and decentralized funds of funds at the local level in order to fully meet the housing and communal needs. Therefore, the enterprises of communal infrastructure belong to another scheme of financing and combine preferential funding from local budgets of self – financing.

The enterprises of social infrastructure function in the area of material production and outside the manufacturing sector. Therefore, they are divided into three groups:

- enterprises that are fully in budget financing;
- enterprises that are partially financed from the local budget;
- enterprises that operate on the principle of self – financing.

Today local governments can sell, buy, lease land and use them like collateral, to pass them as a contribution to the statutory funds of join stock companies, limited liability companies, cooperatives, financial credit institutions and other enterprises and institutes. They are empowered to manage the enterprises of housing and community sector through the use of tax, credit and subsidy regulation and through the use of investment, privatization, deregulation and public procurement. We may say that the local authorities have rather wide range of economic methods to finance housing and community facilities [1, p. 58].

The problem is the inefficient use of available financial methods or non use of them as such. For example Ukraine has 5 local taxes: a property tax other than land, single tax, fee for certain types of business activities, fee for parking, tourist tax. They give local budgets less than 4% of revenues as opposed 40 – 60% in the cities of developed countries. Despite the fact that international experience demonstrates the ability of local taxes become a major source of funding for city expenditures, especially social infrastructure, there is a lack of local fiscal resources in Ukraine for adequate financing of housing and community infrastructure.

The important component of the communal authority revenues must become the tax for realty that under Art. 10 Of the Tax Code of Ukraine. The said tax is recognized in this codified act to be local. The fact is that the basic conditions of property maintenance are provided by the local community and its authorities, so the main part of property tax must be transferred to local budgets [2, p. 151].

The existing regulatory framework of the industry (especially acts of local self – government) has no legally established mechanisms for providing financial and management development, in particular the methodological tool for evaluating the effectiveness of the financial – economic activity of utilities that does not contribute to investments is absent [3, p. 277].

The reformation of the current system needs proper financial support, and therefore, it’s not just about finding investors and government funding of projects in this sphere but above all about the use of the revenues from paying utility bills. In fact, the size of the tariff is established by the local authorities with the approval of State Inspectorate for prices at a level which must cover the costs incurred by utilities and in case of confirmation of the prices and tariffs which are lower than those of economically justified costs, the authority, which has it confirmed, has to compensate the adequate difference to the enterprises from the local budget [4, p. 3]. However, the activity of Ukrainian communal enterprises in the context of self – financing is loss making. The actual expenses for communal service significantly exceed the rates. Accelerated development of housing and inadequate engineering support of housing and community facilities, accessibility and low cost of energy which were common in the years of Soviet Union created a situation of the maximum ignoring of the energy conservation and introduction of the low – cost technologies in the housing and community infrastructure. In recent years, new construction and rehabilitation of sewerage system have not been accomplished. The preventive maintenance has not been accomplished in full, and this is the result of the significant deterioration of enterprises’ funds. Due to the senescence of assets and increasing technological losses there is a constant increase in the cost of utilities. The largest sizes of loss (40 – 50%) are registered by the water supply and the drainage enterprises. Plumbing, sewerage system and heat supply require more than $ 4 billion.

In contrary to the urgent need of the enterprises of the housing and community sector in the capital, they own the limited abilities of the access to the financial researches. In general practice we may distinguish several ways of financing this sector:

- at the expense of funds of local budgets;
- at the expense of state centralized capital investments;
- on the basis of equity participation of the enterprises;
on the expense of lending money;  
at the expense of public funds and funds of the owners of the private firms;  
construction of the housing and community facilities objects by a public way.

Innovative financing schemes of housing and community enterprises at the territory of Ukraine are not used today. Besides, the government funding of the current activity and the investments in housing and community facilities were stopped in order to transfer utilities in self-financing. The development of self-financing system of the communal enterprises is extremely slow. This slow development has general macroeconomic factors and structural barriers such as legislation and policy on tariff setting, local political problems. In case of the impossibility of providing the investment needs of communal infrastructure with the responsible authorities, the international practice uses the mechanism of the public-private partnership. In Ukraine in still doesn’t work at full capacity, although a complete legal framework is established. That’s why the immediate task is to generalize the relevant international experience in order to learn its consequences in the conditions of Ukrainian reality.

European countries use such trends of the public-private financing for the development of housing and community sector as: financing through the output of obligations; fundraising under warranty of insurance organizations; providing the enterprises with technical means upon leasing.

Under the current “Concept of the Development of public-private partnership in housing and community facilities” involvement of the private sector in the development of housing and community facilities is assumed in the form:

- consulting services;  
- the use of the mixed forms of the public – private partnership;  
- formation of joint ventures in the field of heat supply, water supply and drainage;  
- implementation of the priority projects of the modernization of community facilities by attracting of the financial resources and installation of equipment;  
- introduction of the new technologies by the private sector in the housing and community industry;  
- joint participation of local governments and private partner in the scientific researches, development of normative legal framework, increased consciousness of population etc.

For each concrete project must be chosen its own form of public-private partnership taking into the consideration the aim of attraction of the private business and the balanced distribution of the risks. Thanks to such collaboration the attraction of the private investments to the development of housing and community facilities will take place, the revision of rate policy and principles of budget support will be materialized in this area. The positive sides of this activity will be the decrease of the risk of the inefficient use of funds from local budgets and providing of the effective management with the objects of the communal property. Also, the increase of revenues to budgets and creating a competitive sphere that will encourage the development of market relations [6, p. 221].

Various forms of financial resources of the private sector are an alternative source of financing the development of all sectors of the social infrastructure. The involvement of the private sector in order to finance the communal facilities has become widespread in the developed countries and in the countries that are still developing. It can be done in terms of variety and forms of the delegated management and concession [7, p. 100].

One of the forms of delegated management is project financing, that allows the realization of multilateral projects in compliance with parity of interests of all its members and usage of different financial equipment: equity investments; debt financing; leasing; trade credit of the suppliers; innovative financial mechanisms, etc.

The object of the project investment is the projects of the sector of the social and industrial infrastructure which is characterized by the significant capital intensity, low commercial effectiveness, but is of strategic importance for the economy of the country. Such sector covers the objects of transport, energy, communication, water supply, sewerage, recycling of solid waste etc. Project investment schemes can also be used during the construction or restoration of large industrial facilities [8, p. 7].

The positive effect of private sector involvement in the field of communal water supply and drainage is caused by the increase of management efficiency. The examples of project investment in water supply and sewerage sector have caused the decrease of the costs to 10 – 40% (USA, Canada, Scotland, Ireland), in transport – to 10 – 17% (according to European Commission). However, the international practice provides enough of counter – examples where such actions have led to an increase of the communal tariffs and social tensions. The cooperation experience of the state and the private capital doesn’t give the unambiguous reasons to assert its efficiency. Taken in Ukraine methods of the cooperation of the state and the private sector have not given the desired results yet.

The largest dissemination of project investment is accounted for 70 – 80 years of the twentieth century. In projects of the public – private partnership in the infrastructure area, the project investment has begun to be introduced in the early 90’s. Since then the concession agreements become an integral part of the financing schemes of many infrastructure projects in industrialized countries and countries with dynamic economic development (South East Asia, South America). Concessions belong to the unconventional financial methods that allow the use of domestic and foreign investments, the loans and grants of the international financial institutions.
This factor makes the project investment convenient for the development of communal infrastructure. We know that financing of the infrastructure projects is impossible without the involvement of multiple borrowings which in different projects can reach 85% of total capital of the project concession company [7, p. 102].

Considering investment schemes and forms, it is determined the size and the type of the effect of investment project. Let's try to identify a common sequence of actions involving various forms of finance that can cover problematic sectors and enterprises of communal infrastructure of different levels of loses and payback (Figure 1).

---

**The development of the mechanism of the realization of the financial payback projects, which are attractive for the enterprise – manufacturers services, the partners – contractors and suppliers, direct and financial investors.**

**Inclusion to the financing program socially important projects from state and local budgets relating to the emergency facilities by which project estimated documentation is designed.**

**The development of the schemes of the project investment in which there is a justified motivation and determined different market participants of the housing and community services that will be involved to the investment.**

---

**Figure 1. The sequence of the actions with the involvement of different forms of financing**

According to the World Bank classification, we can single out 3 sectors that have the largest realization of the project investment:
- electricity (production, transmission and distribution) and natural gas;
- transport: airports (terminals, runways), railways (equipment, transport), ports, toll roads (bridges, highways, tunnels);
- water supply and drainage (production, transmission and distribution of the drinking water, collection and wastewater treatment).

The number of investment projects for the 20-year period in these sectors shows that the world's most popular forms of private investment in the energy are investments in new construction (450 billion dollars) and concessions in the sphere of transport and water supply (50 billion dollars).

Let's examine the project of water supply and water purification in Buenos Aires implemented in the form of project finance on a concession basis during 1993-1999. Concession was given to the French company Lyonnaise des Eaux – Dumez, which offered the greatest reduction in tariffs (to 27%). Initial conditions of water supply system were characterized by the problems appropriate to the communal facilities of the Ukrainian cities: the high level of depreciation utilities, large water and heat loss during the transportation by the customers, the acute shortage of funds for the restoration of networks and new construction.

Concessionaire Company annually invested in the construction and modernization of water supply more than 200 million dollars. Concessionaire Enterprise was covering the territory with population of 6 million inhabitants (70% of the populations). During the concession new lines were built and new consumers were connected and the labor productivity increased twice. Upgrading technology allowed reducing of water loss and the increase of reliability of work. The consumers received a significant benefit from lower prices due to the lower rates and expansion in the water supply net.

International Finance Corporation acted like a creditor and invested in the concession 60% of the general cost of the project or 2,4 billion dollars. Corporation acted as a recipient of a certain shares of the concessionaire company, independently provided a loan for 10 years in the form of a credit account and participated in the banking consortium, which gave the loan for 12 years.

Significant role in the success of the project in Buenos Aires played a financial participation of the international concern which has extensive experience in reforming housing and community facilities based on the concessions. International financial organizations are the reliable source of the credit resources for the financing of the infrastructural projects. They contribute to the redistribution of project risks and make projects less risky for other creditors and investors.

In the group of the World Bank the main role in the project investment is played by the World Bank of Reconstruction and Development (IBRD), International Finance Corporation and International Investment Guarantee Agency. IBRD provides the governments with financial help for the development of internal infrastructure and calls for the strengthening of the private sector positions in this area. Today the World Bank and the European Bank of the Reconstruction and Development credit Ukrainian communal enterprises.

Let's note that the loan capital in the practice of the developed countries and the countries which are still developing is “cheaper” than investment resource. For this reason concession projects by an average of 80% are
financed by various credits. The number of investors and creditors of the large communal projects can be different. The described concept in Buenos Aires counted four foreign and four internal investors. Apart from international financial organizations the sources of credit of infrastructure project are government agencies and commercial banks (Table 1).

The use of the budget costs of central and local governments in the project investment has additional functions. The governments of the countries provide direct assistance in the form of the government guarantees, credit support, tax credits etc. Direct budget financing is used in exceptional cases of the large social significance of the project. Let’s note that the government support plays a positive role in the drafting of the financial package of the concession consortium.

The most significant role in the project investment is played by the government export credit agencies of the developed countries, the credits and guarantees of which foresee the purchase of the equipment of the adequate country for the realization of the investment project (Export – Import Bank of the USA, the Corporation of the export development of Canada, Department of export credit guarantee of Great Britain, Ministry of International Trade and Industry of Japan).

Table 1. The sources of the involvement of financial resources in the communal infrastructure

<table>
<thead>
<tr>
<th>Internal sources</th>
<th>External sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government sources</strong></td>
<td><strong>Government sources</strong></td>
</tr>
<tr>
<td>2. Local budget</td>
<td></td>
</tr>
<tr>
<td><strong>Self-financing</strong></td>
<td><strong>Fees</strong></td>
</tr>
<tr>
<td><strong>Banking</strong></td>
<td><strong>Commercial banks</strong></td>
</tr>
<tr>
<td><strong>Private sectors</strong></td>
<td><strong>Private sectors</strong></td>
</tr>
</tbody>
</table>

Most financial functions of the project investment are performed by banks. They provide direct lending, issuance and placement of bonds, organization of the credit agreement and evaluation of the project. Banks use various methods of financing: they compile freelance credit agreements, form consortiums or syndicates for joint credit.

The convenient option of bank lending is to provide a grace period that exempts the concessionaire from payment of the obligations until the project starts to generate income. However banks charge fees for the arranging of the financing, banking consortium management and agency services.

Another important source of the financing of the Ukrainian communal infrastructure may be the costs of domestic and foreign private sectors. Because of extremely high requirements of Ukrainian communal enterprises, financial investments and loans from international financial institutions and foreign creditors are insufficient to cover necessary expenses.

Successful implementation of concession project primarily depends on the quality of the financial package because its financial structure and conditions directly affect the total cost of the project, internal rate of return, investments payback period and other financial indicators.

One of the main regulations of the housing and community facilities of Ukraine today is “The program of the Reformation and Development of housing and community facilities for years 2009-2014”. The program funding is provided by the state and local budgets end enterprise funds as well as by the introduction of special tax regime by VAT of housing and communal services and services of heat supply.

The program provides financial and economy implementation of the reformation of the housing and community industry in the following areas:
- development of the financial mechanism of the provision and the maintenance of housing (mortgage, credit unions, etc);
- transition to the economically – based tariffs for all the categories of consumers of housing and community services;
- government support in the providing and maintenance of housing;
- restructuring and write – off bad debts in the housing and community facilities sector only in case of the transition to cost – based tariffs.

It's put on the state budget the realization of the investment projects from the reconstruction and the big repair of the housing, projects for improvement of housing management and reduction of specific indicators of resource use. Significant attention is paid to the development of the institution system to attract investments of the international financial institutions and the resources of the international technical assistance directed for the
reformation of housing and communal utilities. Funding of the program implementation of these investment projects is realized by:

- target funding of selected projects on a competitive basis;
- partial or full refund of interest rates on loans for the project realization;
- full refund of interest rates on loans or partial repayment of the main sum of the projects granted by the subjects of small and average business for the realization of the investment project of energy conservation in the houses.

With consideration of the basic principles of the program we can affirm that the document took into account the possibility of using private capital and providing private investors with the public guarantees. According the results of the final report on the realization of the program in 2015 we may determine the state of legal approximation and the efficiency of public – private partnership in the form of project investment in the communal infrastructure of Ukraine and the further recommendations for its development.

Conclusions

The enterprises of the housing and community infrastructure are loss making and they need huge investments in order to upgrade funds, modernize and improve the management systems. The priority of housing and community infrastructure in terms of lack of budget costs and self – financing is seeking of new sources of the financial resources from the private sector and from the international organizations in terms of delegated management, renting or concession and also creating of favorable investment climate in housing and community facilities to attract investments, loans, grants.

The practice of project investment provides wide possibilities of the development of housing and community sphere. State participation in these projects is mediate. Mainly it is limited by providing the investors and creditors with the guarantees and taking of the project risks. Sources of direct lending of the infrastructural projects are: international financial and credit institutions, commercial and state banks, export credit agencies. The participation of experienced international corporations, the development of effective financial packages and financial schemes contribute to the successful realization of the projects and development of communal infrastructure. The use of foreign experience concerning the involvement of the private sector resources is able to accelerate the fundamental reconstruction of the housing and community infrastructure of Ukraine, to enhance the level of service, industry profitability and the development of social infrastructure of the country.

References


Список літератури

1. Шевська, О. І. Економічні важелі розвитку житлово-комунального господарства [Текст] / О. І. Шевська // Сучасні проблеми й тенденції формування ефективної системи державного управління

Стаття надійшла до редакції 29.11.2014 р.