### "Alexandru Ioan Cuza" University, Iași The Faculty of Economics and Business Administration The Doctoral School of Economics and Business Administration

#### ABSTRACT OF THE DOCTORAL THESIS

# THE PUBLIC-PRIVATE PARTNERSHIP: AN INSTRUMENT FOR THE EFFICIENCY OF THE FINANCIAL MANAGEMENT OF LOCAL COMMUNITIES

Scientific coordinator: Mihaela Onofrei, PhD Professor

> PhD Candidate: Zaharioaie Marina

#### TABLE OF CONTENTS

#### INTRODUCTION RESEARCH METHODOLOGY

### CHAP. 1 CONTENTS OF THE FINANCIAL MANAGEMENT OF LOCAL AUTHORITIES

- 1.1. Characteristics of the financial management of local authorities
- 1.2. The financial decisions of local communities in the context of administrative decentralisation
- 1.3. Evolution of the funding sources of local authorities
- 1.4. Foundations of the financial decision at the local level, in the context of financial difficulties
- 1.5. Innovative funding sources and instruments that can be used at a local level

# CHAP. 2 THE CONCEPT OF PUBLIC-PRIVATE PARTNERSHIP AND ITS USAGE IN PUBLIC ADMINISTRATION

- 2.1. Short history of the public-private partnership
- 2.2. Conceptual limits concerning the public-private partnership and its characteristics
- 2.3. Types of public-private partnership in international theory and practice
- 2.4. Factors in using the public-private partnership at the local level and their influence

# CHAP. 3 FUNDING THE LOCAL COMMUNITIES THROUGH THE PUBLIC-PRIVATE PARTNERSHIP AND ITS PROBLEMS

- 3.1. The situation of the local communities in the context of the current budget constraints
- 3.2. Strengths and weaknesses in using the public-private partnership at a local level
- 3.3. Obstacles in the development of the public-private partnership and ways to overcome them

# CHAP. 4 FINANCIAL IMPLICATIONS OF USING THE PUBLIC-PRIVATE PARTNERSHIP IN LOCAL COMMUNITIES

- 4.1. Limitations in analysing the impact of the public-private partnership
- 4.2. The role of the public-private partnership in the local decision system
- 4.3. Study on the impact of the public-private partnership on some local public services in Romania

4.4. General recommendations on the efficiency of using the public-private partnership at a local level

## CHAP. 5 STUDY ON THE USAGE OF THE PUBLIC-PRIVATE PARTNERSHIP IN THE WATER SUPPLY SECTOR

- 5.1. Evolution of the public-private partnership in the water supply sector
- 5.2. Models of the water supply public services in some European Unoin states.

#### Comparative analyses

- 5.2.1. The French model: high fragmentation
- 5.2.2. The English model: total privatisation
- 5.2.3. The Dutch model: resistance to change
- 5.3. The public water supply and sewage system in Romania: realities and perspectives
- 5.4. Evaluation of the efficiency of the water supply and sewage companies
- 5.5. Analysis of the relative efficieny of the water supply and sewage companies in Romania
  - 5.5.1. Data Envelopment Analysis
  - 5.5.2. Literature review
  - 5.5.3. Methodology
  - 5.5.4. Results of the research

CONCLUSIONS AND SUGGESTIONS
BIBLIOGRAPHIC REFERENCES
ANNEX 1 SERVICE LEVEL FOR APA NOVA BUCHAREST
ANNEX 2 USING THE PUBLIC-PRIVATE PARTNERSHIP AT A LOCAL LEVEL IN ROMANIA

#### **ABSTRACT**

Considering the situation in most countries of the world, where we can notice an increase in the funding needs of the public services and of the infrastructure works in the context of the existence of strong budget constraints, the problem of finding alternative funding sources appears ever more often.

The problem we started from in drawing this paper is the unfavourable financial situation of local communities, combined with the need for local investments both in public services and in infrastructure works. Therefore, the local public managers find themselves forced to search for new funding methods and sources, and a solution may be the partnership with the private sector. In the case of Romania, the public-private partnership is still in an incipient stage both at a local and at a national level, and it is mainly used as management contracts or concessions, with no extended projects that imply a substantial financial contribution from the private investors. This situation could be explained both by the fact that Romania has no tradition of an active private sector because of the communist period, and then of the lengthy privatisation and reform process that did not always have the expected results, as well as of the scepticism that exists in the public sector related to the usage of such projects. In the context of the extension of the economic crisis, which affected the ability to make investments from public funds, there appears ever more often the problem of attracting private investors in fields and sectors that traditionally belonged to the public sector, such as: road, railroad, or airport infrastructure, local public utilities services, and even healthcare or educational services. Thus, the question that arises is whether or not the public-private partnership can be a solution to the financial difficulties that local communities face?

The motivation for choosing this research topic comes from the reality noticed in Romania, where, although there are differences in what concerns the quantity and quality of both the local public services provided and in performing public infrastructure works, the usage of the public-private partnership is nevertheless low. This situation differs both from the case of the Western European States and from that of many ex-communist states, which have moved from its usage in fields such as road infrastructure to much more complex fields, such as healthcare, education, or law. The budget constraints that affect at present all Europe have also determined paying greater attention to the introduction of the private sector in the provision of public

services and in performing infrastructure works, an aspect that is not encountered in Romania. Therefore, by approaching this topic, we aimed to identify the causes of this *statu quo*, to present solutions for surpassing the existing problems, as well as to analyse whether already existing projects, which use private capital, are or not more efficient than those that use exclusively public capital.

The purpose of this paper was to perform a theoretical-applicative study that would analyse the ability of the public-private partnership to become an instrument for improving the financial management of local communities. In order to meet this purpose, we attempted to accomplish several **objectives**:

- Analysing the main characteristics of local financial management and of the decision process in local communities;
- > Studying the effects of the budget constraints on the funding sources of local communities and on the degree of the usage of the public-private partnership;
- ➤ Defining the characteristics of the public-private partnership both from a theoretical perspective and from that of international practice, and analysing the factors that influence the resort to this form of cooperation;
- Analysing the role of the public-private partnership in local public finances and in its development perspectives at the level of the local communities in the urban environment in Romania;
- ➤ Comparing the efficiency of the water supply and sewage companies according to the source of capital (public or public-private).

In order to meet these objectives, the paper was drawn and structured into the following **five chapters**: Contents of the financial management of local authorities, The concept of public-private partnership and its usage in public administration, Funding the local communities through the public-private partnership and its problems, Financial implications of using the public-private partnership in local communities, and Study on the usage of the public-private partnership in the water supply sector.

The first chapter of this paper - Contents of the financial management of local authorities - aims to establish the conceptual frame of the financial management of local communities and its characteristics, to stress its importance in the good management of public money, and to analyse the financial decision and the funding sources in the context of

decentralisation and of the existing budget constraints. We considered it necessary to analyse, first of all, the activities that are the responsibility of local financial managers, since the manner in which they are performed directly influences the good management of the locality. The attributions of the local financial managers are numerous and varied, starting from measuring the expenses in the local budget in relation to the objectives set, to insuring funding sources that cover the public expenses that require funding, up to finding solutions to attracting additional financial sources, insuring the budget balance and controlling the way in which the actions and activities meant to reach the objectives have been performed. The representatives of financial management play an important role, since they must insure the efficient spending of public money, taking into account the local priorities, the existing budget constraints, as well as the current and future needs of the citizens. All these aspects make the decision process at the local level even more difficult and stress the importance of the local financial management for the good performance of the activity within the locality. All the financial decisions made by them have a direct effect on the quality and quantity of public services and on the infrastructure works performed for the citizens, so that it becomes more and more difficult for the local manager to decide what should be funded, since in many cases, the decision to fund certain services implies under-funding others.

The second chapter of this paper is dedicated to clarifying the concept of public-private partnership, by explaining the forms it may take, as well as by pointing out the main ideas in the economic theory that govern the need for the intervention of the state in economy, on the one hand, and the virtues of the introduction of the market in the supply of public services, on the other.

In our review of the specialised literature, we noticed, first of all, that there is no unanimously accepted opinion in what concerns defining the public-private partnership, in establishing its features, nor in what concerns the question whether or not it is a suitable alternative at the disposal of public authorities, or merely a creative funding alternative, which aims to remove some public expenses from the budget. We consider that irrespective of its approach, what is relevant is whether or not it brings benefits of an economic and social nature, and that it should be analysed as an alternative for the central and local management of the states. We consider that both approaches of the public-private partnership can be taken into consideration, and therefore, in a broad sense, the public-private partnership means work

agreements based on mutual involvement (over and above any contract) between an organisation in the public sector and an organisation outside the public sector, and *in a narrow sense*, a form of structural cooperation between public and private partners in what concerns the planning, construction, or usage of the infrastructure facilities, in which they share the risks, costs, benefits, resources, and responsibilities. These differences in defining the public-private partnership appear because both specialised literature and international practice are extremely varied, and often a certain approach appears in order to meet the needs and peculiarities of a certain field or of a certain project.

In **Chapter three** of the doctoral thesis - Funding the local communities through the public-private partnership and its problems — we aimed to analyse the public-private partnership as an emergent form for funding the public services at a local level, in the context in which the public authorities are confronted both with budget constraints and with the need to approach the urban challenges in a sustainable manner. Using the public-private partnership is in its turn a challenge for the local communities, since it implies taking risks and overcoming obstacles.

We consider that the public-private partnership is an opportunity that may benefit both local communities and private investors. Local communities have been affected by the economic and financial crisis, which had a negative impact on their ability to start investments. For the local communities, it is especially difficult to face the effects of the economic crisis, because they do not have the same levers that public authorities at a central level can use, such as the monetary or fiscal policy. The action margin of local authorities is relatively restrained, and they have to take actions in order to obtain income for the local budget, within legal limits. In this context, a solution in order to comply with the budget constraints they face would be to externalise a part of their administrative activity, such as the information service, the cleaning service, landscaping, performing sports facilities, or food markets, with the help of private capital. The solution of using various forms of public-private partnership is taken into consideration not only because of the budget constraints, but also because of the need to increase the efficiency in the supply of local public services. Attracting private operators would lead to increased competition, but in the end this aspect will be reflected in the quality of the public services supplied to the population. Nevertheless, our opinion is that the public-private partnership has not been used at the expected level because, inevitably, it was also affected by the economic and financial crisis. The economic and financial crisis affected projects that were under way, those in the design stage, and completed projects. Therefore, the local communities and the business environment must find variants that, combining the efforts of each party involved, would benefit both partners.

Increasing the degree of usage of the public-private partnership in the future depends on how it will adapt to existing needs, at the central and local level in each state, as well as on the way it will meet the challenges it will face. The way in which *European funds will be used in funding the public-private partnership* is, we believe, a first aspect that may positively influence the increase of the usage of the public-private partnership. The local communities must profit not only from the funding instruments made available by the European Union, but also from the funds from the the European Investment Bank, which aims to be a promoter of the public-private partnership for the economic and social development at a local level.

In **the fourth chapter** of our doctoral thesis, we attempted to perform an empirical analysis, whose purpose was to stress the impact of the public-private partnership on the financial situation of local communities, as well as its place among the options considered by public decision makers in funding the local communities in Romania.

Through our analysis, we noticed that the public-private partnership is used more often in large localities, where there is qualified personnel, an ability to achieve and monitor the projects, as well as a higher attractiveness for private investors. Also, larger local communities in Romania use more often investment projects that attract European funds. We noticed that in smaller localities, the weight of the expenses for investments in total investments is higher than in large communities, an aspect that can be explained by a lower management ability of the public decision makers to use alternatives in funding local public services. We noticed that in local communities there is a tendency to increase, in the future, the number of projects performed in public-private partnership in communal economics services, in the provision of social services, in tourism, in healthcare, and in education.

An important tendency we noticed in the answers of local public decision makers is that there is no mechanism for comparing the costs between the public and the private funding option for some public services. We consider that the non-existence of such a mechanism is dangerous, because on the long term, in the absence of appropriate monitoring from the local public authorities, such projects may have negative effects. This can be explained by the fact that the private partner will follow their own interest, which may have negative effects both on the local

budget (according to the characteristics of the projects), and on the users (through the price or tariff paid). Even in this context, with no mechanism for measuring costs, from the answers to the survey applied, we could see that the perception of the public decision makers is that, through the projects accomplished together with private partners, savings have been achieved for the local budget, but only in some cases.

In what concerns the factors that determine the public decision makers to use projects in a public-private partnership, we could notice the tendency for the highest importance to be given to those of financial nature. Thus, some of the most important factors that positively influence the decision to use projects in a public-private partnership is the fact that spending public money is avoided or that it is a solution for the budget constraints that affect the locality. On the other hand, the factors with a negative impact that obtained the highest score are the lack of interest of the private sector and an increase of the tariffs for the end users.

Chapter five had the objective to test the hypothesis that private capital companies are more efficient than public capital ones. In tis respect, we used, in a first section, a comparative analysis of the main models that exist in the water supply and sewage system in Europe, and then we presented, in a critical descriptive analysis, the characteristics of the public water supply utility service in Romania. In order to test this hypothesis, we performed an empirical analysis, through which we measured the relative technical efficiency of the water supply and sewage companies in Romania, using a non-parametric mathematical approach based on the *Data Envelopment Analysis* technique. The results obtained were then processed in IBM Statistics SPSS 20 through a descriptive analysis and using contrasts in order to test the work hypothesis.

The organisation of the water supply and sewage field is fragmented at the international level, and several consecrated models exist, such as the French, the English, and the Dutch models. In what concerns its evolution in time, fluctuations can also be noticed, through a switch from the public to the private option and vice-versa in time. At present, although in most cases we can see a higher efficiency of private companies, because of the characteristics of the service, in certain situations, a process of re-nationalisation or switch to a city administration can be seen.

In what concerns the situation in Romania, starting with the 1990's, a process of reform and reorganisation of the system could be noticed, due to the need to make it more efficient, as well as because of the requirements of the European Union concerning its quality and increasing its coverage. Currently, in Romania there are 44 regional operators that own most of the market

share, and this regionalisation process will continue in the coming years. We consider this process to be beneficial, especially for the users, since it increases the coverage in the rural environment and in tourist areas, scale savings are achieved, and the quality of the supplied water increases. In what concerns the involvement of the private sector, there are only two companies with mixed capital, both belonging to the French society Veolia Environnement. This is due to the fact that, because of the reorganisation process and of the possibility to access European funds for making investments, the local communities preferred inter-city co-operation to private capital.

In order to be able to analyse, in comparison, whether the private option is more efficient than the public one or not, we looked at the relative technical efficiency of the water supply and sewage companies. This approach was performed using the *Data Envelopment Analysis* in order to rank the efficiency scores and then to see which are more effective. Based on this analysis, which included the 44 regional operators in the field of water supply and sewage, we could see that the efficiency scores obtained by the two companies using mainly private capital are higher than those of the companies using public capital. Nevertheless, a limitation of this analysis is the low number of companies using private capital in comparison with public companies, which may affect the result of the conclusions. We also wished to analyse if the efficiency scores are influenced by other external factors, such as the density of the population in the coverage area of the company, subventions, unbilled water, and the size of the company. Our analysis revealed that there is no correlation between these factors and the efficiency indexes, which indicated that the efficiency of the analysed companies is strictly determined by the way of using the input for obtaining the output, and the other factors have a negligible influence.

At the end, we presented the **Conclusions and suggestions** that synthesise the main aspects approached in the presented chapters, some recommendations, and the personal contribution to the investigated topic.

The recommendations that should be taken into account by the public decision makers in performing the financial management of the local community refer to the fact that they should make sure that the entire system is stable, insuring thus the reliability of the city administration. Because of the decentralisation process, central level authorities expect local communities to provide high quality services, but they do not meet their obligations related to subventions and financial transfers. The financial management of local communities must therefore make

continuous efforts to insure the predictability of the incomes, which is the key of the reliability of the local community and of its ability to request credits in terms that are favourable to them. Another recommendation is for the local public authorities to focus on a healthy marketing strategy and on financial plans, to attract investments, and to encourage alternative sources for drawing financial resources. In order to achieve this, a strong relationship is required between the public authorities and the stakeholders, who should play an active role in establishing the local development priorities and policies.

The local communities should, through the policies applied by their representatives, function as a business, since good corporate governance will determine an increase in the credit rating of the locality. Another aspect that should be taken into account is the issue of the spiral "low quality of the services leads to a defective collection of the usage taxes".

The personal contributions in this doctoral thesis are presented throughout the five chapters and mainly include: the clarification of some theoretical and conceptual aspects of the studied topic, with an accent on the concept of public-private partnership, a concept surrounded by numerous controversies, the performance of an empirical analysis concerning the usage of the public-private partnership at the local level in Romania and its impact on the local public finances, and an empirical study that analyses whether or not there are any differences between public capital companies and public-private capital companies in the water supply and sewage sector.

The results of the research materialised into 15 articles published as single author or in national and international conferences and published in various journals indexed in databases.