

# Issues of Efficiency in Public Real Estate Resources Management

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**Key words:** rational resources management, economic efficiency, analysis of social benefits and costs, management, administering, public real estate resources, public purposes.

## SUMMARY

It should be underlined that public real estate resources management is conducted in very specific conditions, what result in the need for the use of other procedures and ratios than in private sector. Thus there is a need for use of individual approach and specific systems and management techniques. It requires also accurate application of analytical instruments.

Studies over efficiency in public sector require transformation of methods and analytical instruments successfully applied in private sector. They require also identifying, quantification and defining value in monetary units (if it is possible) of analyzed components of benefits and costs, which do not exist on traditional goods and services markets. Important issue in this valuation is quality and accessibility to sufficient information. It can assumed, that traditional analysis of financial profitability of investment should be only exceptionally the base for public programs assessment. Usually this analysis can be used as supporting tool besides the assessment of other than economic effects of public real estate resources management.

## STRESZCZENIE

Istotną kwestią odnoszącą się do zarządzania zasobami nieruchomości jest występowanie specyficznych warunków, które powodują potrzebę używania innych procedur i wskaźników niż w sektorze prywatnym. W związku z tym pojawia się potrzeba indywidualnego podejścia oraz specyficznych systemów, a także technik zarządczych. Ponadto zarządzanie tego rodzaju nieruchomościami wymaga odpowiedniego zastosowania instrumentów analitycznych.

Badania nad efektywnością w przypadku sektora publicznego wymagają przetransformowania metod i instrumentów analitycznych, które są z sukcesem stosowane w sektorze prywatnym. Ponadto wymagają one identyfikowania, kwantyfikacji oraz zdefiniowania wartości w jednostkach pieniężnych (jeśli to możliwe) analizowanych składników korzyści i kosztów, które nie pojawiają się na rynkach tradycyjnych dóbr i usług. Istotną kwestią w tej wycenie jest jakość oraz dostęp do wystarczających informacji. Można przyjąć, iż tradycyjne analizy finansowej rentowności inwestycji powinno tylko wyjątkowo stanowić podstawę dla wyceny programów publicznych. Najczęściej tego rodzaju analiza jest wykorzystywana jako narzędzie wspierające wycenę pozaekonomicznych efektów zarządzania publicznym zasobem nieruchomości.

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## 1. INTRODUCTION

In this paper authors focused on chosen economic conditions affecting public real estate resources management. They attempted to answer the question if economic criteria are relevant to assessing the efficiency of activities undertaken by public sector. One of the most basic economic criteria is economic efficiency, which is commonly used to analyse and monitor qualitative and quantitative aspects of widely understood real estate resources management. But its usefulness seems not to be so obvious while applied to real estate which is in the possession of the Treasury or local government units.

The word *management* can be defined as “sensible activities undertaken by individuals or group of people in order to share limited resources among competitive ways of use on the basis of reasonable premises that lead to the best (optimal) result (...)” (STRUZIK, ŻRÓBEK 2005). From the public real estate resources management point of view, the word management can be defined as a series of organizational and executive activities leading to satisfy various public needs by entitled units, i.e. local governments. This description is consistent with legal acts regulating the management of real estate resources owned by the Treasury and local government units. It should be relevant to the two essential functions of public administration units and local governments: evidential and regulating national economic development.

Evidential function means the responsibility for providing public social and technical services. Regulating economic development, in turn, can be identified i.e. with taking part in state owned resources management in order to protect the national economy. However, the tendency to reduce state’s activities in providing services, which can be provided by private sector, has been recently observed. Therefore, it seems that the scope of activities undertaken by state units in the frames of public assets management should be (and in fact are) consecutively limited. Moreover, they should be visibly rational, what means not only caring for proper public assets management, but also achieving public interests. Activities aimed at public benefit include not only satisfying current needs, but also supporting and directing social development.

In this article general rules of public real estate resources management are presented. Special attention was paid to estimation of the economic efficiency. Some examples and procedures are based on Polish experiences in public real estate resources management. Moreover, own studies conducted in 1992-2008 in Poland, Belarus and Ukraine were used. In result, conclusions presented in this article can be universal for Central and Eastern European countries.

## 2. BASIC ASSUMPTIONS FOR PUBLIC REAL ESTATE RESOURCES MANAGEMENT

Public real estate resources management requires adequate system of public institutions and local authorities possessing ownership or other rights to public real estate resources along with legal and other than legal regulations defining contents, scope and ways of execution. There are mutual connections between particular components of this system and relations with surroundings, as shown on Figure 1.

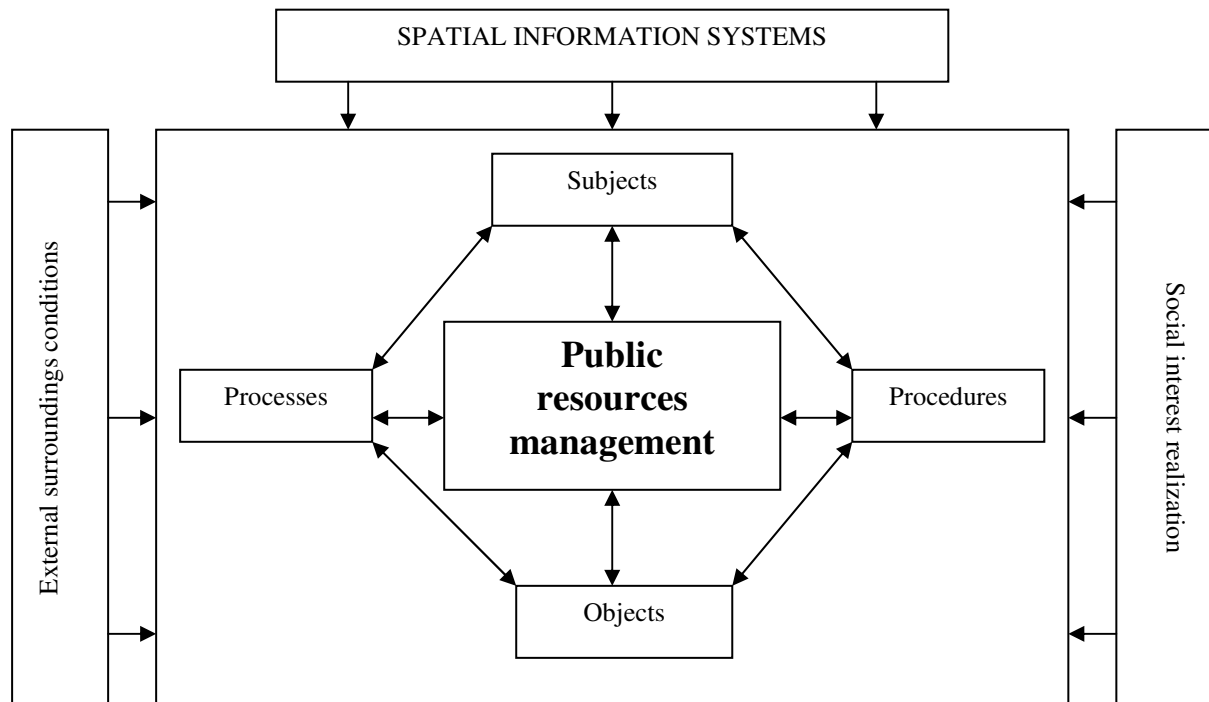


Figure 1. System depiction of public resources management  
Source: Own study.

Figure 1 presents four basic parts of public real estate stock management system including:

1. object of management (types of real estate gathered to real estate resources)
2. subjects of management (administrators of particular public resources)
3. processes related to management resulting from external factors' influence
4. procedures influencing management as the result of social pressure

In the field of system's efficiency the significant meaning has information gathered in separate systems and legal and non-legal standards containing the matter, scope of procedures' realization and mutual relations among the parts of system.

Public real estate resources management needs the proper use of available methods and instruments because it influences the quality of real estate resources and they are necessary for satisfying current and future public needs. Thus, the management process includes directed and purposeful activities undertaken by entitled public administration units, what means series of real and legal actions enabling using real estate in the way that is consistent

with its purpose, in order to satisfy various, current and future, collective public needs. This view of management can be considered as one part of widely understood public management while relating to particular subjects.

Public management issues can be found in theories of organization and management and are based on management, political and economic sciences. Valuable contribution to this topic made the *public choice theory*, which explains what goods should be purchased by public sector, who should bear the cost of purchase and how manage these goods. The necessity of public goods can be justified by i.e. external effects of activities, which influence people not directly involved. Typical public goods are not provided by units operating on the free market or their supply is insufficient, i.e. national defense. The existence of public goods can be also justified by market failures and imperfect regulations (NOGA 2000. p. 13; KLIMCZAK 1998. pp. 338-351; STIGLITZ 2004. pp. 90-107). The management theories can be applied to public management only with one restriction – public organizations have their own specific features. It should be also assumed, that public real estate resources management is run in specific, adjusted to public sector conditions. One specific feature is supporting character of public sector units and this mission determines the goals that public administration should attempt to achieve. It is important that the activities cannot be aimed at achieving high return rate from the investment, what is common in private sector. Public sector differs from private one also in ways of measuring the success or failure of fulfilled duties and regulations limiting the kind of activities. Public real estate resources management is limited by rigid legal frames and every action must be taken in accordance with legal acts (FERNHAM, HORTON 1999. pp. 26-45).

It is sometimes questioned if economic criteria used in private sector are relevant to public real estate resources. In 1990-1995 the common criticism arose over new concept of public management. It was directed mainly to excessive economization which did not match public units' ethical responsibility towards society model and to limited practical usefulness of management instruments applied from private to public sector. Criticism was directed to both precisely defined aims and duties of public institutions and introduction of economic measures, as differences of public sector conditions were underlined (SAVOIE 1995). In result, taking into consideration the scope of duties realised by public administration units and local authorities, it is difficult to define the set of factors influencing the level of efficiency in real estate management. It should be underlined that some economic criteria can be applied in efficiency assessment and they are based in public sector economic theories.

### **3. CHOSEN LEGAL REGULATIONS CONCERNING REAL ESTATE RESOURCES MANAGEMENT**

*Administration function* relates to common management activities, i.e. current exploitation, maintaining real estate in good condition and other activities required by law, like the following:

- real estate register and value assessment,
- applying for mortgage register and regulating other rights to real estate,
- protecting real estate from damages and devastation,

- assessing, collecting and vindicating the fees for giving real estate from public resources,
- other “service” activities related to real estate management process.

*Public real estate resources management*, in turn, means strategic approach and is particularly applied to:

1. preparing the plans for the public real estate resources use – depending on the level of management, the plans should take the form of strategy, tactic plan or operation program,
2. reasonable resources management, that includes:
  - selling and buying real estate for real estate resources – these activities should ensure the maintenance and gaining real estate that are crucial for satisfying social needs, and selling the ones which are inappropriate for realization of the particular public purposes,
  - tenancy, lease and granting real estate from public resources and undertaking proper activities in judicial proceedings in cases concerning i.e. ownership or other rights to real estate,
  - collaboration with proper local government units and other units managing real estate of the Treasury on the basis of legal acts.

#### **4. PECULIARITY OF PUBLIC REAL ESTATE RESOURCES MANAGEMENT**

The main purpose of this kind of management is to satisfy the needs of society. In this view, the main assumption for reaching public goals is providing public goods and services. State's intervention can be justified by the fact, that market mechanism may not lead to Pareto efficient resource allocation. Moreover, there is a need for avoiding socially undesirable share of incomes and for providing goods that are socially desired (STIGLITZ 2004. pp. 90-107, BORODO 2000. pp. 13-15).

Public purposes are defined in legal regulations. Five basic categories can be pointed:

1. appointing parts of land as particular components of transport infrastructure (roads, waterways, railways, airways), and also building and exploiting objects and devices of transport, communication infrastructure and signalization;
2. providing and maintaining public objects and devices for various public needs, especially arteries for stable transmission of necessary media, i.e. water, steam, gas and energy, and for neutralizing the effects of human housing and economic activities;
3. building and maintaining the infrastructure necessary to provide public services: administration, social and technical, what should result in sustainable regional development;
4. protecting and caring for places with historical and cultural value (i.e. monuments, annihilation and martyrdom memorials), protecting endangered species of plants, animals or habitats;
5. searching and exploiting natural resources owned by the state and other public purposes, not mentioned in the Act on Real Estate Management.

Public real estate can be also the object of market turnover. Trading real estate resources components is one aspect of the resources management. It should be understood as sale, exchange and relinquished, perpetual usufruct, tenancy or lending, granting and transfer to permanent management. Moreover, public real estate can be charged with limited property

laws, act as contribution, be passed as an asset to newly established state enterprise or foundation. It should be underlined that incomes from assets owned by public finances sector units include inflows from tenancy, lending and other similar agreements, collected dividends on property laws and sale of assets and rights.

Managing real estate belonging to public resources should be realised accordingly to rules of *proper economy*. Thus, it should be assumed that it would include series of proper real and legal activities undertaken by managing subjects that ensure public real estate resources use consistent with their purpose and function. It usually concerns the realisation of public purposes and satisfying collective needs of citizens.

Moreover, proper economic policy should be identified with ensuring fundamentals of market economy, including regulations and other instruments protecting ownership and agreements. Improper, imprecise defined property laws along with the lack of efficient ownership and agreement protection result usually in the lack of motivation for saving and investment, i.e. renovating and modernising real estate, and at the same time in inefficient use (STIGLITZ. 2004. p. 91). Therefore, public real estate resources management includes also collecting and allocating public resources. Special attention should be paid to transparency and openness of public finances (except for tax secret). Openness and transparency of public finances are ensured by, among others, publishing information concerning i.e. the scope of duties and services provided by the unit and the amount of public money transferred for their realisation.

## **5. CHOSEN ECONOMIC ASPECTS OF PUBLIC REAL ESTATE RESOURCE MANAGEMENT**

Previously formulated rule of proper economic policy applied to public real estate resources should be identified with rational management. Public or private subjects and institutions are operating on the market in the conditions of limited access to resources (scarceness of resources) and it implies the necessity of rational management. Scarceness with respect to public real estate resources should be seen as specific economic features of real estate, especially: deficiency, localisation, functional correlation and high capital-consumption; and also as features characteristic for public sector, i.e.: rules of financing the expenditures, needs for providing services and public goods, and also public interest in profits and costs analysis.

Rational management is one of the elementary concepts in economy. Economic sciences focus on describing how subjects operating in various social-economic conditions are using limited resources; allocate them into various alternative applications, and also what motivate them to make particular choice. *Choice* is another important economic category, strictly connected with rational management. Sensible decision demands collecting, analysing and using in creative way all the available information concerning possible options of resources allocation. Thus rational decision-maker not only possesses good information, but is also able to analyse it. In practice, small amount of decisions is made in conditions enabling sensible choice, what results in lesser efficiency of agreed solution. Complexity and changeability of market environment limit the availability of proper information, which is significantly restricted by costs, time necessary to gain it and not very high reliability. The restrictions

result in decisions made in risky and high uncertain conditions and decision-makers attempt only to minimize the risk as they are unable to eliminate it.

Methods used to analyse the efficiency of resources and factors influencing this efficiency can also be found in economic sciences. The most common method is *Pareto efficiency*. Given situation is said to be *Pareto efficient* if it is impossible to rearrange things to make at least one person better off without making anyone worse off. It should be noticed that Pareto efficiency theory explains absolute level of every units' wealth, not relative one. Moreover, three conditions must be fulfilled:

1. efficiency of trade – particular goods and services are directly sold to consumers who price them the highest (consumers are on the highest available indifference curve);
2. efficiency of production – operating on the verge of production possibility, i.e. when increasing production of one good means decreasing the production of another one;
3. efficiency of production structure – providing goods properly adjusted to individuals' needs, that is adjusting quality and quantity of public goods and services to local societies' needs.

However, decisions made in public sector usually improve situation of one part while at the same time deteriorate situation of the other one. It is popular belief that public sector units are less efficient than relevant private ones. It result from organisational differences (soft financing limits in public sector), political influence on decisions, limited or not existing competitiveness, very small tendency to risk, legal regulations and budgeting discipline, etc.

## **6.MANAGEMENT EFFICIENCY ISSUES**

Specific economic character of real estate market implies that the assessment of investment efficiency demands complex analysis and should include series of activities, such as:

- identifying and defining strategic purposes, assignments and investor restrictions;
- analysing market situation, factors of internal and external environment;
- preparing the set of possible alternative ways of carrying out the venture and assessing all the consequences of each planned scenarios;
- preparing the forecast of expected incomes from the investment and necessary investment and exploitation inputs in money value;
- summarizing the analysis and assessment of general profitability of each option to choose the optimal project (maximizing the difference between the benefits and costs including the alternative cost, only when benefits exceed the costs).

Although the procedure of investment projects efficiency assessment does not seem to be complicated, it requires the analysis of benefits and costs connected with project in long term. Measuring the efficiency of economic results achieved during the business by private sector units is based on solid methodical support and use of various management instruments. For example, assessment of economic efficiency of investment on the real estate market can be done by the investor using traditional criteria – return rate or average income rate index,

criteria from real estate valuation methods and criteria from complex techniques – discounted cash flows. The most popular complex techniques, although with some defects, are net present value NPV and internal return rate IRR. NPV means value revised with value of initial investment expenditures. Thus it presents the result of expected incomes in present value terms minus expected investment expenditures (net income). NPV can be calculated with the use of following formula:

$$NPV = R_0 + R_1 / (1 + r) + R_2 / (1 + r)^2 + R_n / (1 + r)^n$$

where:

R - net income from particular investment in  $t$  period

r - discount rate presents

n – number of years planned for project

If NPV is a positive value, the investment is considered to be economically profitable, because it means that generated income can cover the costs of introductory phase and are enough to maintain the real estate. In situation, where  $NPV = 0$ , the discount rate (defined with internal return rate) ensures the equilibrium between current value of inflows from investment and current value of expenditures. If internal return rate exceeds discount rate, the NPV is positive either. Investor decides on project with higher IRR.

The state unit, managing real estate rationally and purposefully, makes even more sophisticated decisions and needs not only clear quantity assessment of possible alternatives, but also detailed quality assessment. As a result – the state unit cannot use only the assessment of financial side.

Benefits and costs analysis connected with particular investment on the real estate market undertaken by public sector units is done generally on the base of the same analytical methods as comparable analysis done by entrepreneurs for private sector. But there are many differences emerging from social context of public real estate resources functioning – it is typical analysis of benefits and costs in social view.

This analysis comes from different approach to benefits and costs. Social analysis takes into consideration not only benefits and costs reflected in economic profit, but focuses on difficult or impossible to measure social-public benefits and costs, such as: the influence of the project on safety, life protection, level of education, natural environment, sustainable regional development, etc. Its core is thus not influence of project on internal surroundings of public organization, but the influencing external surroundings.

Another peculiarity of social benefits and costs analysis is the way of normalization its units of measurement. Therefore valuation of public real estate resources must be done with instrument other than market one, because they are insufficient (do not reflect social benefits and costs) or such prices do not exist at all. Depending on the kind of non-money social benefits and costs, to assess them dual/social prices can be used (shadow prices), valuations based on declared usefulness (i.e. in projects including natural resources valuation), revealed

preferences method or constructive method (i.e. life value assessment in enterprises aimed at improvement of safety on the roads).

Another difference of social benefits and costs analysis in public real estate resources management is a way of defining the amount of discount rate. Market interest rate, which is traditionally used by private sector, not always can or should be applied to public sector, while government set lower interest rates for loans. Among economists there is no agreement about the method for social discount rate valuation. Because of character of public investment, which effects would serve further generations, social discount rate often does not reflect preference rate of future consumption nor alternative cost.

For the example: in Poland public real estate resources management, which is both economic and social issue, requires taking the decision if:

1. public land should be sold, or
2. public land should be given for perpetual usufruct.

In this situation following problems can appear:

- land sale results in changing the land owner and means achieving single amount to public budget,
- perpetual usufruct guarantees long-term flow of payments, but single payment has relatively small value.

In perpetual usufruct low first payment (initial payment) is applied, what gives the opportunity to direct money on advancing land development. Perpetual usufruct requires also determining land purpose and setting the close date for development. Thus, the development process is monitored. There is also the possibility of comparing income from perpetual usufruct to real estate price. In some situations the third solution can be introduced: land can be leased for 20-30 years with agreed way of use.

## CONCLUSIONS

Public real estate resources management requires detailed solutions, especially in Central European countries and other countries introducing market rules to their economies. Special attention should be paid to specific character of public real estate sector and its size (i.e. in Poland still over 40% real estate is owned by the public sector).

Public assets managers should act efficiently in order to satisfy public needs and future mass purposes. However, some of these assets cannot be found on the classic goods and services market. Moreover, public real estate can be sold (privatization), reprivatized or restituted, what requires among others:

1. elaborating coherent rules for public real estate resources management,
2. introducing changes to existing law,
3. updating the term 'social purpose',
4. choosing the criteria for economic efficiency of public resources management valuation,
5. preparing the list of social purposes, where economic efficiency has limited application,
6. introducing the update information on management object to decision making process,

7. improving the quality of public resources managers, both on central and local level. Studies over these issues are to be continued.

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## BIOGRAPHICAL NOTES

Prof. **Ryszard Żróbek** is project manager and senior Land Registration, Cadastre, Land Valuation System and Land Management expert with over 25 years experience. He has got experiences in creation of land valuation system in the transition period in Poland, this some on information system for valuation purposes. In mentioned fields he posses the most up-to-date professional knowledge combined with good practical and international experience. He has prepared some educational programs concerning real estate registration, appraisal methods, rational land use of land and real estate management.

He has international practice (different projects in foreign countries like Belarus, Ukraine, Lithuania, Hungary, and others). He prepared for World Bank project named “Land Consolidation and National Land Found in Poland”, and for Polish Government – “System of and Management”.

He worked for the World Bank and F.A.O. organization.

He has experiences concerning to create of land valuation system for transition period from social to market economy. He was advisor and consultant in projects respecting build up land valuation systems in Belarus, Slovakia, and Ukraine.

Prof. R. Żróbek was introduced some papers in International Conference where subjects enveloped:

- theory and practice land valuation methods
- develop of real estate markets
- create education system for land valuation
- develop the cadastre system,
- development of real estate management system

**From 2001** - professor of technical science University of Warmia and Mazury in Olsztyn  
 Other training:

<b>Institution</b> <i>Date from / to (month / year)</i> <b>Degree or Diploma obtained</b>	Delft University of Technology (Netherlands) from September 1992 to December 1992 Education in Land Information Systems
<b>Institution</b> <i>Date from / to (month / year)</i> <b>Degree or Diploma obtained</b>	University of Florida (USA) from January 1993 to March 1993 Land Administration System
<b>Institution</b> <i>Date from / to (month / year)</i> <b>Degree or Diploma obtained</b>	Ministry of Physical Management and Construction (Poland) 1992 licensed valuer
<b>Institution</b> <i>Date from / to (month / year)</i> <b>Degree or Diploma obtained</b>	The Major Surveyor Office (Poland, Belarus) January 1996 – January 1998 Project Manager (The principles of real state valuation system in Poland)
<b>Institution</b> <i>Date from / to (month / year)</i> <b>Degree or Diploma obtained</b>	F. A. O. 2003 – 2004 Country expert (Land tenure data base)

**Membership of professional bodies:**

- Polish Society of Surveyors
- Polish Real Estate Society
- European Real Estate Society
- Regional Study Association
- International Federation of Surveyors (com. 9, Land Valuation)
- Polish Society of Real Estate Appraisers

**Others skills:**

- licensed real estate valuer
- licensed real estate manager
- licensed surveyor
- academic teacher (professor)

**Present position::**

- Full Professor at University of Warmia and Mazury in Olsztyn (Faculty of Surveying and Land Management)

- Member of Education Board – International Journal of Strategic Property Management
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M.Sc. **Alina Żróbek-Róžańska** graduated University of Economics in Poznań in 2004 and since then she has been working as a researcher and academic teacher in the Faculty of Economic Sciences at University of Warmia and Mazury in Olsztyn. She has been conducting studies over public real estate management in the view of attracting private investors and she presented the results in Polish and international conferences (ERES in Dublin and RSA in Leuven). She also published few scientific articles. Currently she is completing researches for Ph. D. thesis.

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