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Research Report

**The role of long-term financial
and investment planning for
construction of local and region
al economic development**

K.S. Cichocki

**Instytut Badań Systemowych
Polska Akademia Nauk**

**Systems Research Institute
Polish Academy of Sciences**



POLSKA AKADEMIA NAUK

Instytut Badań Systemowych

ul. Newelska 6

01-447 Warszawa

tel.:(+48) (22) 3810100

fax:(+48) (22) 3810105

Kierownik Pracowni zgłaszający pracę:
Dr inż. Leszek Kruś

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KRZYSZTOF S. CICHOCKI
Systems Research Institute, Polish Academy of Sciences,
01 447 Warszawa, Newelska 6;
e-mail: kcichocki@ibspan.waw.pl

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THE ROLE OF LONG –TERM FINANCIAL AND INVESTMENT PLANNING FOR CONSTRUCTION OF LOCAL AND REGIONAL ECONOMIC DEVELOPMENT

1. INTRODUCTION

Local economic development is a process which contributes to well being and quality of life of local society and, in a planned and programmed way, facilitates progress. The development plans and programs, which are to be implemented, are usually included in a strategy of local development.

The strategy is a widely approved document, which over a period of minimum 10-15 years determines strategic objectives, operational programs, tasks and activities which will lead local society to a state and conditions in which the society will function in the future. The operational programs and important tasks must be consistent with the strategic objectives defined in the strategy. Implementation of the strategy will ensure members of this local society (for example a city inhabitants) higher standards of living, improved quality of services and more convenient life.

The strategy will also provide analysis which will show that the planned tasks and programs can be financed by the local government (LG), and that over the period of 15 years, each year, the necessary funds will be assured by the LG budget.

The development of a long-term Financial Plan (FP), with operating elements of long-term debt management, and a long-term Capital Investment Plan (CIP), coordinated with the FP, is the basis of a feasible development strategy and efficient financial management. The FP ensures funds for financing investment and other programs, included in the strategy, determines safe debt and increases a probability of acquiring external resources, including EU funds and debt. Implementation of computer model helps construct FP and CIP, and enables prompt and accurate construction and verification of the plans when needed. The long-term FP and CIP contribute to the improvement of public finance management, help attain strategic objectives of LG development, and facilitate economic growth.

Over the period of last 15 years many methodologies for preparation of strategies have been developed and many strategies elaborated. Many CIP were also developed and implemented. However, very seldom a thorough financial analyses and credit worthiness assessments have been carried out and included in the strategy to show that the strategy is financially feasible and can be readily implemented by a LG.

We will present a method of financial feasibility analyses for strategy implementation, with utilization of computer models and multi-year planning and programming, and give examples of decision making process regarding investment financing and acquiring EU funds by a LG. The presented example and method of long-term financial and investment analysis and planning is typical of LG thinking – it leads to maximization of funds for financing development and infrastructure, and contributes to the improvement of life of local societies in Poland.

2. STRATEGY OF LOCAL GOVERNMENTS ECONOMIC DEVELOPMENT

A strategy is a widely approved document, which over a period of minimum 10-15 years determines intelligent foresight (a vision) of a local community development and a final picture, in which members of the community see their future in 15 years. The strategy involves strategic objectives, operational programs, activities and projects which will lead the local society to a state and conditions in which members of the society want to function in the future.

2.1. Identification of needs and SWOT analysis. A Vision.

Identification of an initial state of a LG economic and social development and determination of the LG financial standing – a diagnosis at time of undertaking work on strategy document - is the initial stage of work on development strategy of the LG. The diagnosis should include evaluations of past and present planning and management performance of the LG. The next stage of strategy development is SWOT analyses of a LG, determination of strengths, weaknesses, opportunities and threats regarding its location, budget, production and service potential, system of management, including finance and human resources management and utilization of other local resources. SWOT analyses are usually performed based on questionnaire research and team work, together with the local community representatives.

A LG vision is a state and conditions in which the LG will function in the future, in 15 or 20 years. A vision is a product of people's imagination. A LG vision can be formulated for example as follows: a LG with developed, diversified industry and high quality services creating job positions for the community and capable to offer system of high quality education for the youth, and interesting forms of education for adults.

Implementation of the strategy will help materialize the vision and will ensure members of this local society (for example a city inhabitants) higher standards of living, improved quality of services and more convenient life.

2.2. Strategic and intermediate objectives; Operational programs

The vision is closely related to identification of strategic and intermediary goals and objectives of a community development. Strategic objectives are the most important objectives (usually not more than 3-4), which will help materialize the vision. For each strategic objective we formulate several intermediary (or operational) objectives and some operational programs, which in turn include several projects. It is also important to select the most important projects with high priority of realization, both time wise, and from the point of view of assigning appropriate financial funds for projects implementation. The plan of strategy design and its implementation should be worked out by the LG officials and professionals, in cooperation with the LG community representatives. This can be done by organization of workshops and public consultations with the participation of local officials, community and business representatives, and local media. The workshops could include:

1. Strategic planning regarding a vision development, identification of strategic and intermediary objectives of a community, based on results of SWOT and analyses of present management performance.
2. Presentation and discussion of plans for the strategy implementation, including action plans, methods of financing, establishment of task oriented groups, deadlines for project implementation, and the general system of strategic management.
3. Publicity of the strategy and strategic management - popularization of strategic goals, priority projects and ways of their financing, which should lead to wide acceptance of the strategy.

2.3. Strategy implementation: results and financing

Any LG should first conduct a thorough assessment of its financial standing. Implementation of the strategy plan should include description of tools and methods which will be used during strategy programs and important projects implementation and clear definition of results, which will be observed and easily measured when the strategy is implemented.

The plan could include the following four major implementation objectives:

- Determination of strategic directions of a LG development ensuring feasibility of strategic goals implementation, and formulation of conclusions and recommendations regarding development of the strategic management implementation policy
- Improvement of internal and external communication system, which will meet the local community expectations, including improvement of a LG office work effectiveness, and making the organization competitive and responsive
- Provision, in the written form, of a „Code of the LG good management practices”, as a tool for construction of clear LG management structure, which will introduce real changes
- Integration of the community by using active methods of work, public participation, and efficient dissemination of knowledge at each stage of the strategy implementation.

2.4. Financing the strategy programs and tasks; Financial capability of a LG

LG should know how much resources they have available in their budgets to fund capital projects, and how much they can afford to borrow to finance public infrastructure.

The strategy provides analysis which will show that the planned tasks and programs can be financed by the LG, and that over the period of 15 years, each year the necessary funds will be assured by the LG budget. The development of the FP and the CIP plans ensures funds for financing long-term investment projects and other programs included in the strategy and in yearly budgets, and also increases a probability of acquiring external resources, first of all EU funds, and of effective management of these resources. The investment expenditure and the number of projects planned to be implemented each year result from financial capability and credit worthiness assessment of a LG (ability to finance current and investment activity)¹. The FP plan will help assess credit worthiness of the LG and determine a safe level of debt, and maximum safe level of investment expenditure, which will assure budget liquidity.

Many CIP and FP were developed and implemented. However, very seldom a thorough financial analyses and credit worthiness assessments have been carried out and included in the strategy to show that the strategy is financially feasible, that all important projects, as well as other projects included in the strategy can be really implemented by a LG.

2.4. Monitoring of the strategy implementation; Strategy verification

The implementation of the strategy should be monitored at least once a year, properly supervised and verified when needed. The management/monitoring system of the strategy implementation usually consists of several institutions, each one assigned different functions and tasks. A main supervising and monitoring institution, intermediary institution providing the supervisor with opinions regarding strategy implementation and formulating suggestions for future realization steps, a regional coordinator of the strategy implementation, usually within the LG Office - institutions explicitly responsible for implementation of programs and projects planned in the strategy.

The monitoring and control should include physical realization of projects and project financing.

3. THE NEED FOR FUNDS TO FINANCE THE STRATEGY: INFRASTRUCTURE AND OTHER SOFT PROGRAMS

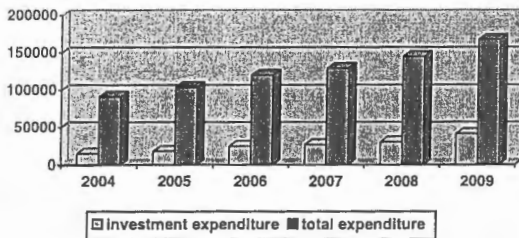
¹ In the period of next ten years, similar to the period of 2004-2009, the analysis of LG will focus on maximization of EU funds, which can be obtained and used for financing various programs and investment projects.

3.1. The Infrastructure Gap

In Poland, as in many other new member countries of European Union (EU), the need for resources to invest in local infrastructure is very high. We observe a substantial infrastructure gap as compared to old member countries of EU. There are less local infrastructure facilities, their quality is worse and related services are of poor quality. Financing local infrastructure investment is of vital importance to local societies, local economic development, and to bridging a large infrastructure gap between Poland and "old" EU countries. In addition, the local government finance sector plays an important role in redistribution of the state revenue.

Below, we highlight specific features of the LG finance sector – growing investment and indebtedness. In Poland, LG expenditure equals close to half of the state budget expenditure, however, the share of local government investment in public sector investment is much larger than 50%. In the period of 2004-2009 capital investment expenditure of local government sector (LG) in Poland, on average, was twice as high as capital investment expenditure of the state budget. In Figure 1 we present the growth of LG investment expenditure.

Ryc. 1. Capital investment expenditure and total expenditure of LG in Poland (m. PLN)



Source : Ministry of Finance database

The share of investment expenditure in total expenditure of local government sector (LG) in Poland belongs to the highest in EU and grows steadily - from 16,5% in 2004 to 21% in 2007, 21,3% in 2008 (over 23% for cities with district status), and 24,8% in 2009. In addition, in Poland, a ratio of investment of local government sector to GDP is high. In 2007 it equaled 2,5%, and was the fourth highest in EU, after Ireland, Latvia and Rumania (average value of the ratio for all countries of EU, in 2007, equaled 1,5%).

3.2. External Funds

Local government infrastructure projects require large outlays of money that are beyond the currently available resources of most LG. The growth in LG investment is accompanied in Poland by systematic increase in indebtedness, from 18,7 billion PLN in 2004 to 25,7 b. PLN in 2007, 28,77 b. PLN in 2008 and 40,29 b. PLN in 2009. In 2007, new debt issues, without pre-financing, increased by about 20%, compared to 2006, in 2008 – by further 8% and in 2009 by 7%. Both, credits and municipal bonds were used for financing investment. The level of indebtedness in 2010, and in the following years will grow.

The rate of increase in investment exceeding the rate of growth of total expenditure results to a great extent from an inflow of funds, to local governments, from the EU budget. In Poland, in 2006, local government investment expenditure co-financed with the EU structural funds, the Cohesion Fund (CF) and the Social Fund (we call them European projects), equaled over 30% of the total LG

investment expenditure. The LG share in financing European projects equaled 36%, and the UE budget share – 64%. The percentage of local government investment expenditure co-financed with the EU funds increased over 2007-2009.

A pace of narrowing the infrastructure gap between Poland and „old EU countries” depends on the ability of LG in Poland to ensure its own financial share when implementing projects, co-financed by European funds. Securing by LG its own funds (own share), which can include debt, is a necessary condition for absorption of European funds over 2009-2013. The condition of ensuring own financial share for implementation of European projects requires that LG (cities, districts and regions) must use either their own funds, or external resources, first of all debt. The fast growth of new debt is the result of the need to ensure resources for own shares by LG. This phenomenon will be observed, consistently with the signed agreements with the EU, over the period 2010-2013.

The national plan for 2007-2013 anticipates that in order to absorb the finances from the structural funds and the Cohesion Fund of EU, Polish LG will have to secure about 6 billion euro over 2007-2013. We can say that over 2010-2013 it will amount to over 1 billion euro yearly.

The necessity to ensure external resource, including debt, for financing European projects creates new challenges for LG, regarding good governance. They include accuracy of long-term planning and efficient and effective management of LG finances and debt.

4. THE ROLE OF LONG TERM FINANCIAL AND INVESTMENT PLANNING IN FACILITATING ECONOMIC DEVELOPMENT

4.1. The need for long term planning

The development of a Long-term Financial Plan (FP), with operating elements of long-term debt management, and a long-term Capital Investment Plan (CIP), coordinated with the FP, is the basis of efficient financial management. The FP increases a probability of acquiring external resources, including EU funds and debt, and of effective management of these resources.

Implementation of computer model helps construct financial and capital investment plans, design yearly budgets and enables prompt and accurate verification of these plans and budgets when needed.

Three factors can be named, which determine the necessity and importance of design and operation of the FP and computer tools supporting long-term financial management. First, over several year period, the funds must be secured, which are required for financing current and delegated tasks (operating expenditures). Second, LG has to determine, over at least 4 year period the funds required for financing investment (selected to satisfy local needs), not exceeding financial capabilities of a LG. Third, the level of debt must be determined, which is safe, and which ensures budget liquidity each year and over a long-term (repayment of debt and servicing the debt must be possible, and these values should not exceed *net* operating surplus). The functions of a FP include:

- relating, and make consistent yearly budgets and long – term financial plans
- relating budget prognosis (first of all revenue and investment expenditure projections) with strategic objectives of the LG, as formulated in the strategy, and with the long – term CIP
- assessing creditworthiness of the LG – an ability to borrow, and identify areas of financial management, specially debt management, that need improvement.

It is of great importance to prepare a long term (about ten year long) finance and debt program, which each year ensures budget liquidity and efficient debt management. The debt projections should include the existing debt and future debt (planned in the future), and should be coordinated with the operating surplus – excess of current revenues over current expenditure. On the other hand it should meet to a largest possible extent, local investment needs. The needs for infrastructure projects (the funds needed for implementing them), often by far, exceed financial capacities of financing the needed projects and the level of debt that the LG can issue.

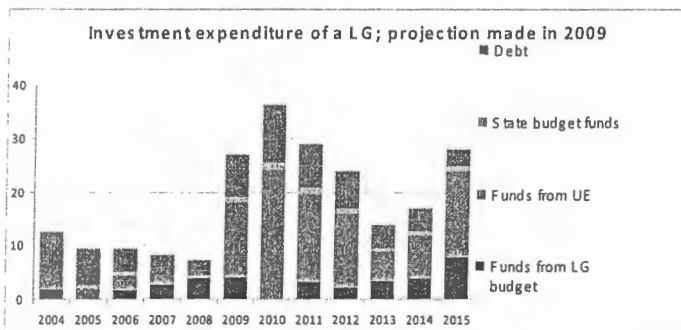
Prior to undertaking any borrowing, local governments should first conduct a thorough inventory of all of their capital needs, including improvements to existing facilities as well as the need for new facilities. By considering all needs together at one point in time, a government can more readily prioritize its needs and assure itself that it is doing the most important projects first.

Analysis of investment needs and the needs for debt allows to consider all internal resources and possible external funding sources together at one point in time, and helps a government to make maximum use of any grants or concessionary loans available to it, thereby saving the costliest resource-loans or bonds at market rates of interest-for those projects, where no other funding is available, but the projects are nonetheless urgent.

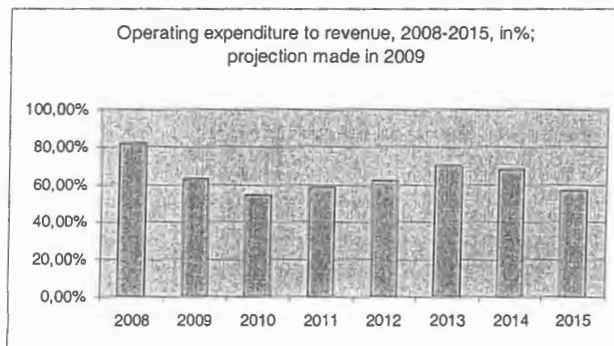
Municipalities often plan financing needed, large investment from borrowed money, which later they can not repay - for which cost of debt service turns out to be higher than the municipality's operating surplus. Sometimes, very ambitious local governments start investment they can not afford, and which are not safe for their future budgets. Then, a LG experiences "investment – indebtedness trap". As a result of too high investment and too high debt, the LG has to drastically decrease investment expenditures (number and scope of investment projects), often for several years, or even stop financing an uncompleted investment project, or reduce operating expenditures.

In the long term FP and CIP we determine each year, over the whole period of planning, a maximum level of investment expenditure, which ensure budget liquidity each year and is safe for future budgets. Such investment expenditure should assure operating expenditure at a level which enables implementation of all own and delegated tasks of a LG. At the same time the operating expenditure should be kept under control and not allow for too high increase of wages and other routine expenditures. In figure 2 we present maximum, safe investment expenditure planned for 2010-2015,

Ryc. 2. Investment expenditure planned for 2009-2015, in m. PLN. Projection made in 2009.



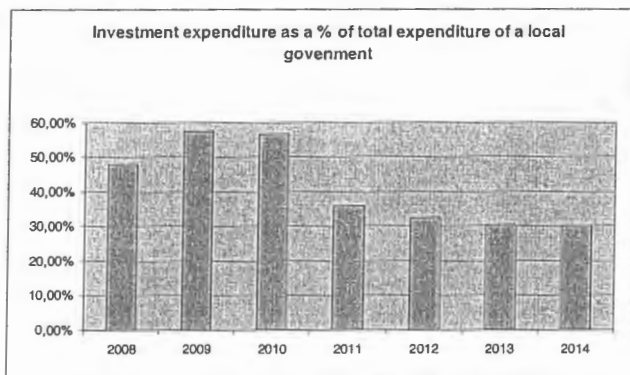
Ryc. 3. Operating expenditure as a percentage of LG total revenue. Projection made in 2009



and show sources of financing these investment. In figure 3 we present operating expenditure, which in relation to the LG total revenue do not exceed 66 %. Formulating upper limit on operating expenditure could be an objective of financial management.

Some LG select as an objective keeping the investment expenditure in relation to the LG total expenditure above a special level, for example above 30%. In figure 4 such an objective was selected by a LG for a period of 2010-2014. The two objectives presented in figures 3 and 4 can be selected simultaneously.

Ryc. 4. Investment expenditure as a percentage of LG total expenditure



Source for Ryc. 2-4: own calculation based on data received from the LG LI

4.2. Revenues and Current Expenditure in Polish LG

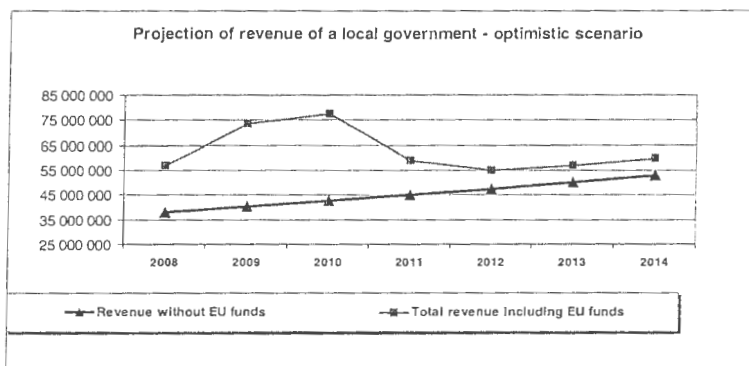
The Law on Local Governments Revenues (LLGR) defines sources of local government revenues, the rules for determination and transfer of the general subvention and grants from the state budget, and the conditions under which LG may take credits and issue securities. The Polish LG finance model bases on general framework of local government finance and debt management (Bahl, Lin, 1992; Leonard, 1996; Cichocki, Kleimo, Ley, 2001), and draws from many countries experience. However, the system has been developed in Poland to fit into Polish reality and the evolving legal regulations. Currently, in Poland, there are three types of local government: gmina - the smallest unit, powiats (which comprise several gminas), and voivodships, which comprise several - up to 25 powiats. LG's revenue includes tax revenue, fees and charges, state budget grants, and revenue from owned capital and property. The LG revenue structure differs depending on the type of LG. For example gmina income may be derived from the following basic sources:

1. Own (locally generated) taxes, fees and charges
2. Profits from owned capital and properties, budgetary units and municipal enterprises
3. Tax revenue sharing from the state treasury under the personal income tax (PIT) and corporate income tax (CIT)
4. General Subvention from the state budget, including the largest part of it - the Education Subvention. The other parts are unrestricted subsidies: Compensation Subvention, and the Equalization Subvention. The general subvention for powiats and voivodships includes the Education Subvention, Road Subvention and the Equalization Subvention
5. Other transfers (earmarked, or special purpose grants from the central government) - mostly for financing infrastructure, but also for health care and housing
6. Debt emissions
7. Funds from European Union and other EOG countries.

Total national budget revenue serves as a pool of resources for the General Subvention and other intergovernmental transfers. Subventions are allocated across LG by formulas. They are well designed and evolved over recent years to meet the objectives promoting decentralization, strengthening local autonomy and equalizing fiscal capacity. The Equalization transfer provides additional revenues to those gminas, whose tax base is "inadequate" – when its per capita basic tax revenue is less than 85% of the national per capita basic tax revenue. The rich gminas, whose per capita basic tax revenue is more than 150% of the national per capita basic tax revenue contribute to the equalization fund, thus subsidizing the poor gminas.

The PIT is collected by District Treasury Offices (DTO - representative of Ministry of Finance) from persons residing in the gmina and is allocated, by the ministry to LGs as an unrestricted share of the collected PIT. LG also receive a share of the CIT collected by the DTO from firms residing in the gmina. The amount actually allocated includes losses of the overall PIT collected in the national system. The amount received in a given budget year, for example by a gmina, is calculated by taking 0.3934 of the total amount of PIT expected to be collected nationwide for the given year adjusted by the percentage share of the national PIT actually received by the gmina during the preceding year. The LG do not have the right of keeping a given portion of the personal income tax collected from persons residing in their LG. LG have only the right to deprive themselves of some tax revenues - to lower the, set by the state, maximum tax rates, extend exemptions and releases to tax payers.

Ryc. 5. Total revenue planned by a LG for 2008-2014. Projection made in 2007



Source: own calculation based on data received from the LG L1

The most significant source of locally generated revenue is the property tax. Farm tax and forestry tax are special forms of property tax. In Poland, as currently structured its base is the land area per square meter. The rates vary depending on the category of land – the lowest rate is for "other land", and the highest for land occupied by commercial buildings. Tax base bears no relationship to location and market value although many attempts have been made over last years to levy an *ad valorem* base, or implement an intermediary system - for example introduce tax zones for municipalities and poviats, which would lead to the *ad valorem* base.

Total revenue of a LG consists of base revenue, including sources of revenue 1 and 3-4 above, and incidental revenue - sources 2 and 5 above, and the revenue from EU funds. In figure 5 we present projection over 2008-2014, of base revenue and incidental revenue (called revenue without EU funds), and the total revenue including the EU funds.

The base revenue can be projected for future years using general economic growth indicators, the rate of GDP growth, inflation rate and specific locally determined growth coefficients. Incidental revenues, for example sales of property, or investment grants, as well as funds that a LG will receive

from EU, can be forecasted only in close cooperation with the LG and as a result of thorough individual analysis of the LG resources, experience and capability.

The *gross operating surplus* - revenues in excess of operating expenditures is an important notion of financial management. It can be used to fund capital expenditures and is not needed to fund operating expenditures. Thus, the available resources to fund capital public infrastructure projects of LG consist of surplus current revenues (from own revenues, central budget transfers and grants), incidental revenue, funds from international institutions (first of all from EU), and the proceeds from borrowing (loans and bonds).

The *net operating surplus* is defined as operating surplus less costs of spending for service of the existing and planned debt. The larger the level of these resources, the more funds available for financing investment. Surplus revenues must be left for financing investment, and operating surplus cannot in all be spent for debt service.

4.3. Efficient management of LG finances

There are three objectives of efficient financial management: determination of proportion between the investment expenditure, resulting from the strategy and the CIP, and the operating expenditure; ensuring current revenues for financing current and delegated tasks; determination, in long term (and each year) of safe level of debt, which ensures budget liquidity and implementation of current tasks. The design of FP and CIP facilitates achievement of these objectives. Budget liquidity is closely related to ensuring a safe debt in the LG, which depends on the level of *gross operating surplus* – the available resources in LG budget. As a result of decisions regarding investment expenditures, we obtain an annual amount of funds which physically remain in the LG budget at the end of the year.

The development of a long-term FP, debt strategy, and CIP, coordinated with the FP, and approved by the city council, is the basis of an efficient financial management. A LG has to determine over a long period its financial capacity and potential. The analysis of LG financial condition is an important starting point for the sound financial management of a LG. The FP increases a probability of acquiring external resources, including EU funds and debt, and of effective management of these resources, ensuring minimum costs, as well as decreases the risk of wrong decision making. It is recommended that all LG conduct such long term analysis, even if they have no immediate plans to borrow funds from an outside lender. This analysis can identify areas requiring improvement, and lead to a plan for ongoing improvement of a LG's financial situation.

The long-term FP must be coordinated with yearly budgets. All investment expenditure of the budget should appear in the FP, and the FP projects must be included in the budget expenditure. When investment expenditure is changed in the budget, the FP must be verified. The resources assigned to financing projects must be consistent with the objectives of the strategy, and the CIP.

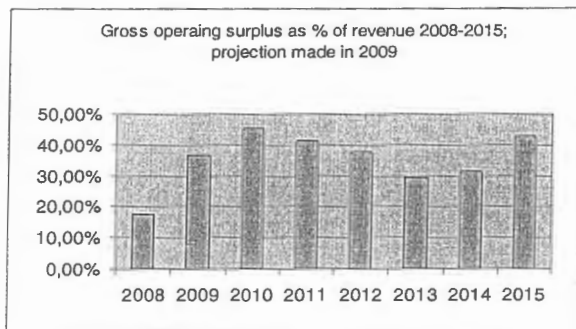
Establishment of creditworthiness of a LG, regarding the past period and the planned period, in which projects included in the strategy will be implemented, is also an essential factor for building the infrastructure, which facilitates economic growth. Debt resources add funds available for financing investment and can contribute to economic development of a municipality. LG should develop debt proceeds projection, for a period of minimum 7 years, including the existing debt and future debt (Bitner, Cichocki, 2009 and 2008). The issued debt should be coordinated with the operating surplus and ensure budget liquidity. It should also result from the investment needs - projects selected for financing.

The possibilities to issue debt by LG are subject to conditions, which result from the law on public finance (lpf). The constraints regard value of total debt to total revenue, and cost of debt service to total revenue, which had to assume, each year, limited values determined in the lpf. The new (2009) lpf requires that debt service is related to average operating surplus over last three years.

Another operating surplus, on the current account, must be determined - an amount of funds which remain in the municipality's budget at the end of the fiscal year (Cichocki, 2001 and 2003, and Bitner, Cichocki, 2008). It equals *net* operating surplus less planned investment expenditures, plus newly borrowed funds, plus LG revenue from sales of property. Too high value of these funds usually means *negative arbitrage*.

In figure 6 we present *gross* operating surplus to total revenue, which over 2009-2015 is above 30%. This is a small element of FP. If we assume that debt service to total revenue will be below 10%, then, the LG from its own funds can finance investment, on average over the period 2009-2015, above 20% of its revenue and about 20% of its expenditure. The surplus presented in figure 6 results from projections of revenue and of operating expenditure.

Ryc. 6. *Gross* operating surplus to total revenue over 2008-2015, in %. Projection made in 2009.



Source: own calculation based on data received from the LG L1

Efficiency of debt management and of other external resources will maintain of vital importance, especially in the light of increasing demand for investment financing. Long-term financial and investment planning and creditworthiness assessment will remain important – for determination of EU funds, which can finance investment, for determination of maximum level of investment, and for efficient timing of debt issue and appropriate selection of a form of debt (bonds or credit).

4.4. Implementation of models and computer tools

Models can help design and analyze FP, including debt, and the CIP. In presented analysis, the model is formulated in a way, which maximizes planned new debt and *net* operating surplus (excess revenue and borrowed funds) for financing investment and serves the purpose of safe debt management. The model enables assessment of debt capacity of a LG, determination of a safe level of debt, and helps determine *debt structure* - bond covenants and loan terms, including repayment structure of debt.

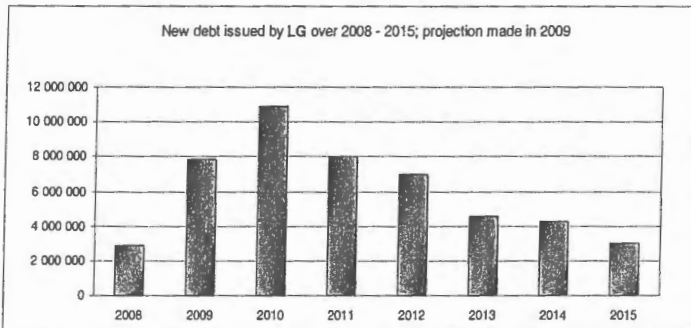
In the model we introduce two types of constraints. The first type constraints, discussed in 5.3., result from binding legal regulations in Poland; they include pledges of collateral or “coverage” requirements by which revenues must exceed debt, and debt service. The additional constraints result from practice of financial management and ensure budget liquidity and continuity of investment financing.

Computer supported models help design long term FP and CIP. They are also very useful in budget analysis (*ex post* and *ex ante*), coordination of yearly budgets and prompt verification of the FP and CIP. The computer models make it much easier, first of all time wise, and also because of analysis of numerous solutions for various scenarios of FP and CIP plans. Thus, development of computer models support strategies of long-term investment financing and of efficient planning of external

funds as a source of financing investment. Therefore, they are essential in analysis of the strategy implementation.

In figure 7 we present face values of new debt shown also in figure 12, planned to be issued to acquire EU funds, and implement investments, shown respectively in figures 11 and 10.

Ryc. 7. New debt planned to be issued over 2008-2015 by a LG, in PLN. Projection made in 2009.



Source: own calculation based on data received from the LG L1

5. THE ROLE OF DEBT IN FINANCING LOCAL INFRASTRUCTURE AND FACILITATING LOCAL DEVELOPMENT

5.1. Standards for debt management

Borrowing should be viewed by LG as a regular source of investment financing. LG, likewise the State Treasury, should continuously use the opportunities of financing offered by capital markets. Development of standards will facilitate improvement of debt and financial management. Bitner, Cichocki (2008), developed 12 standards for measuring debt management efficiency, analyzed the level of performance and satisfaction of these standards by a representative group of LG.

The standards include development and special form of long – term financial and investment plans and of long – term debt projections. They also include - possession of long – term debt management strategy, and of credit and investment rating, and existence of a department for debt management in LG office. Finally, the standards regard transparency for bond and bank loan pricing, efficient timing of debt issue (matching time schedule of investment disbursement) and elimination of negative arbitrage risk, as well as selection of the form of debt with the lowest possible true cost.

Legal regulations play an important role in observing standards defined in Bitner, Cichocki (2008), however, a majority of formulated standards are not yet regulated by law. Activities of central government and of local governments are needed to introduce the proposed standards and enhance level of efficiency of debt and finance management by LG and development of structures and procedures that will facilitate this efficiency. Implementation of these standards will help increase access of LG to municipal capital market, improve debt management efficiency and facilitate acquiring the EU funds.

5.2. The role of debt in application for EU funds

Debt can be used as a standard source of financing investment and can be very useful in applications for EU funds. When LG apply for EU funds, they often can not secure, in their budgets, enough

funds which are required as their own share in financing investment. The sum can amount to 25%-40% of the total investment cost. The only way to secure these funds is to issue debt (take credit, or issue a bond). Without debt the LG would not be able to receive funds from EU which are needed by a local society and often will be utilized by future generations. The obtained EU funds until the end of 2013 do not require to be returned.

In spite of a large increase of LG indebtedness over 2004 – 2009 in Poland, debt is still a relatively minor source of financing investment. In Poland, the ratio of indebtedness (total debt) in relation to total revenue equaled 17,54% in 2007, and remained at a low level in comparison with other member countries of EU (in 2007, average value of the above ratio for UE countries equaled 45,69%). In 2008, the situation in Poland changed only slightly, and in 2009, the above indicator equaled 26,02%. In a LG, the level of investment expenditure, co-financed from EU, as a share of total expenditure varies from very low, to very high levels, exceeding 70 %. The increasing debt used for financing investment will accompany development of local infrastructure and utilization of the E.U. funds over 2010 – 2013. Therefore, it is very important that the debt resources are used efficiently.

5.3. Limits to issuing debt; Current and previous regulations in the lpf

In Poland, the sources of funds that flow into a LG budgets are defined at various levels of detail by: the Constitution of the Republic of Poland, the Law of Public Finance (lpf), and the LLGR. Expenditures of LG are defined by the Local Self-Government Act according to the specificity and the scope of delegated and own tasks, which must be implemented by LG. Legal regulations include pledges of collateral or "coverage" requirements by which revenues must exceed debt, and debt service. Polish lpf of 2005 required (practically requires until 2013), that at the end of each year²:

- (1). Total debt outstanding (indebtedness), as a percentage of total revenues, did not exceed 60%
- (2). Total debt service as a percentage of total revenues did not exceed 15%.

The condition (1) also regards the state budget: public debt can not exceed 60% of GDP. The law introduces a relational feedback between public debt and GDP, and debt issued by local government. For example, when the value of total public debt outstanding exceeds 55% of GDP, then debt service in local budget, by law, cannot exceed 12% of its total revenues. Any percentage of public debt to GDP over 50% imposes additional restrictions on new debt issuance and budget deficit of LG, as well as on the state budget deficit. In addition, the total debt outstanding, as a percentage of total revenues in LG, can not be higher than the ratio of public debt to GDP.

When the value of total public debt exceeds 60% of GDP, then no deficit is allowed in the state and LG budgets. No debt can be issued and guarantees granted either by the state or local government, and a macro-economic program has to be introduced, which decreases public debt to GDP ratio to the level below 60% (or better, below 55%). In many countries in Western Europe and in the USA it is customary to issue debt, which is below 60% of total taxable municipality's revenue.

The above constraints, starting 2006, do not include debt issued for financing projects, which are co-financed with EU funds. Although the legal ceiling for debt service is 15%, the affordable level for a particular LG very often is less. For some LG the level of 15% is too low, and these LG could safely issue higher debt, especially to acquire additional, needed EU funds.

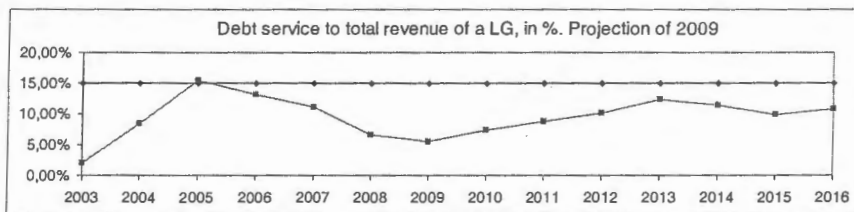
The constraints, and thus, the possibilities to issue debt, changed in the 2009 new law on public finance (n-lpf). The number, which explicitly restrained from above the values cost of debt service to revenue, disappeared and presently these values depend on the operating surplus over the recent three years before the budget year. The n-lpf requires maintaining the operating expenditure at a level,

² In Poland, by law, quarterly financial reporting by LG is required.

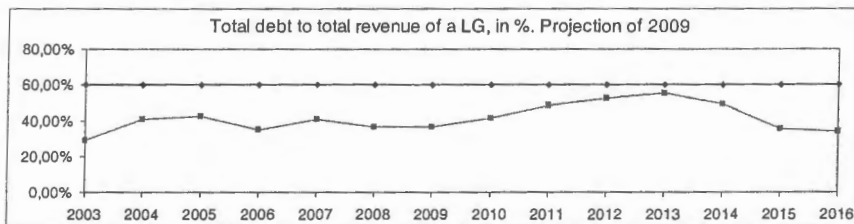
which is not outstripping the growth in operating revenues. It requests that the central government prepares a long-term financial-investment plan (at least for four years), and recommends LG to prepare such a plan, which includes projection of the operating surplus. The new law introduces greater consistency between EU regulations and recommendations of operating programs, and coordinates long-term budget planning with debt management: the operating surplus has to be projected until debt is matured.

In figures 8 and 9 we present projections of the indicators of debt service and indebtedness as a percentage of total revenue. Their values demonstrate that the LG will issue safe debt over the period of 2009-2016.

Ryc. 8. Total debt service as a percentage of total revenue. For 2009-2015 projection made in 2009



Ryc. 9. Total debt outstanding (indebtedness), as a percentage of total revenue. For 2009-2015 projection made in 2009



Source: own calculation based on data received from the LG L1

The total debt service as a percentage of the *gross* operating surplus - should be less than a given positive number, at best smaller than one. Then, not all funds of the operating surplus would be spent for debt service. When the combined total of projected debt service payments are very close to the value of *gross* operating surplus, then no new investment can be financed from *net* operating surplus, usually, for a period longer than one year.

6. EXAMPLE OF LONG TERM STRATEGIC PLANNING BY A LG

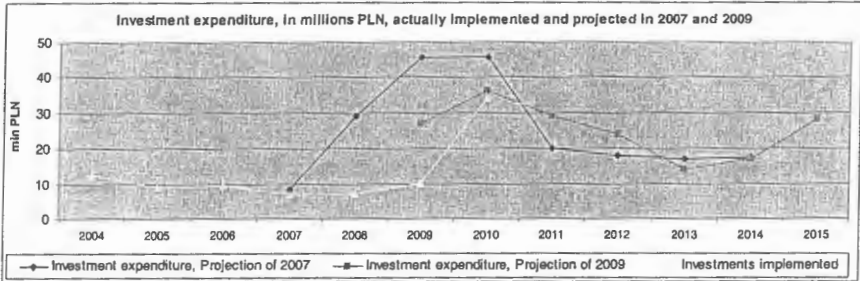
6.1. Strategic thinking. Maximization of funds for financing infrastructure

The undisputable objective of most LG is implementation of all needed investments and programs which are included in the LG development strategy. Because the needs are still enormous, LG managers try to find as many funds as possible, mostly for infrastructure construction. Therefore, they maximize their efforts to acquire as much funds from EU (and from other external sources) as possible, and adjust issuance of safe debt to meet requirements of assuring own funds when they apply for EU money. Their efforts focus on maximization of funds for financing investment projects.

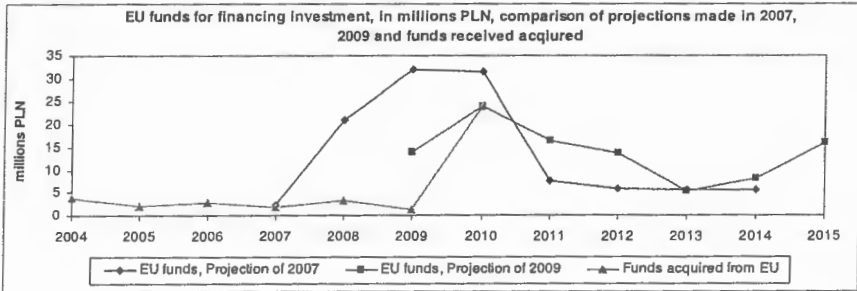
In figure 10-12 we show values of investment and EU funds planned for a period of seven years. In 2007, the LG managers planned application for large EU funds in 2008, 2009 and 2010 and for this

period planned high investment. Because these funds were not received, plans made in 2009 anticipated high EU funds and high investments in 2009, 2010 and 2011. The maximization of funds for investment took place, but the values of anticipated EU funds were lower by about 20%.

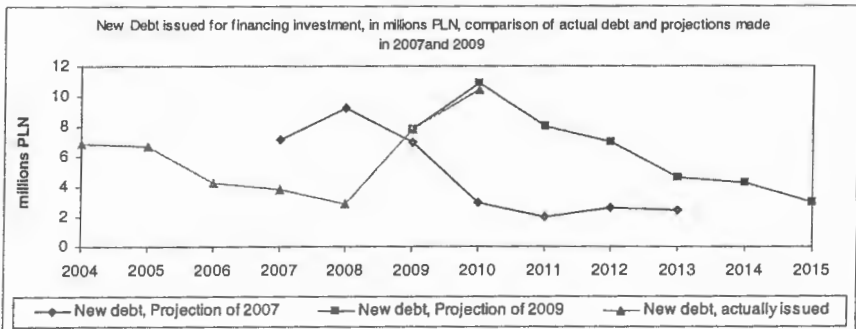
Ryc. 10. Implemented investment expenditure and investment planned until 2015, in m. PLN. Projections made in 2007 and in 2009.



Ryc. 11. EU funds for financing investment, in m. PLN. Actual values and projections made in 2007 and in 2009.



Ryc. 12. New debt for financing investment over 2009-2015, in m. PLN. Actual values and projections made in 2007 and in 2009.



Source for Ryc. 10-12: own calculation based on data received from the LG L I

The level of debt was adjusted to high investment expenditure and the own share funds required for investment co-financed from EU. We can see that at last, in 2010, the LG received high funds from EU. Therefore, the investment and the debt issue in 2010 are high, nearly as high as planned in 2009.

The objective of very many LG is to maximize the total funds (from budget surplus and from debt) for financing portfolio of investment projects. These funds, through imposition of appropriate constraints ensure satisfactory level of operating expenditures (which finance current tasks), budget liquidity, and safe, legally justified level of debt. Along with a capital improvement program, each LG should have a written debt policy establishing guidelines for the use of debt (Leonard, 1996; Joseph, 1994, Cichocki, Leithe, 1999, Bitner, Cichocki, 2008) should include: maximum amount of debt that can be issued each year, specification of the types of long-term debt that will be issued (various credits and bonds), the debt maturity schedule for each debt (issue and repayment structure).

The figures 2-15 presented in the paper are solutions of an optimization model (Cichocki, 2010). We formulate a model in which funds for financing investment are maximized, subject to constraints, legally justified and ensuring budget liquidity.

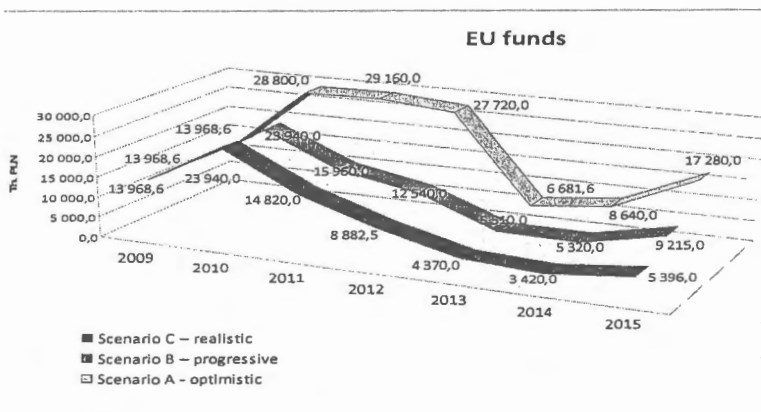
6.2. Scenario analysis

LG should develop a long-term FP and CIP in several scenarios, usually in three and minimum in two scenarios. The LG should determine the lower and upper limits for investment expenditure and debt. The upper limit for investment should be determined as the maximum possible level that the LG can afford. This value depends on the funds that LG could obtain from EU, and very often on debt. The maximum level of safe debt must be also calculated, sometimes with a *given a priori* reserve, which depends on risk aversion of a LF manager.

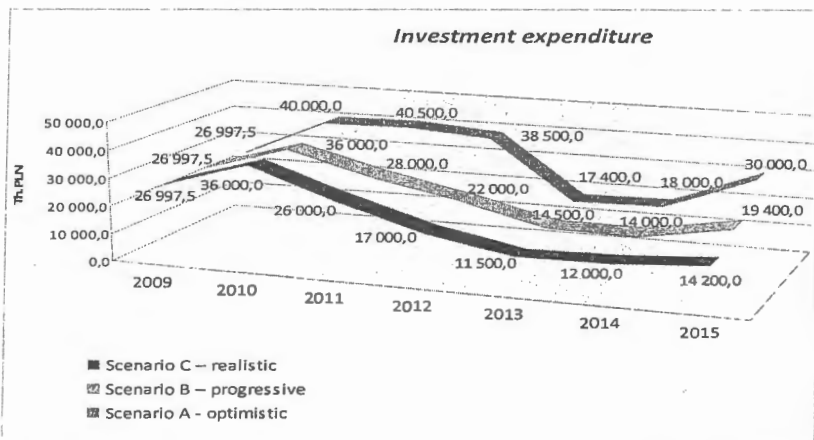
Many ambitious local managers, tempt to have success now, during their term in office, often at the expense of the future. They do not plan safe debt; neither considers scenarios for investment expenditure, which depend on the level of EU funds and the level of debt, which must be safe. Such managers can experience an *indebtedness trap*.

Knowing levels of investment and EU funds and debt for each scenario, it is easier to make informed decisions when plans change, for example when the expected EU funds are not obtained.

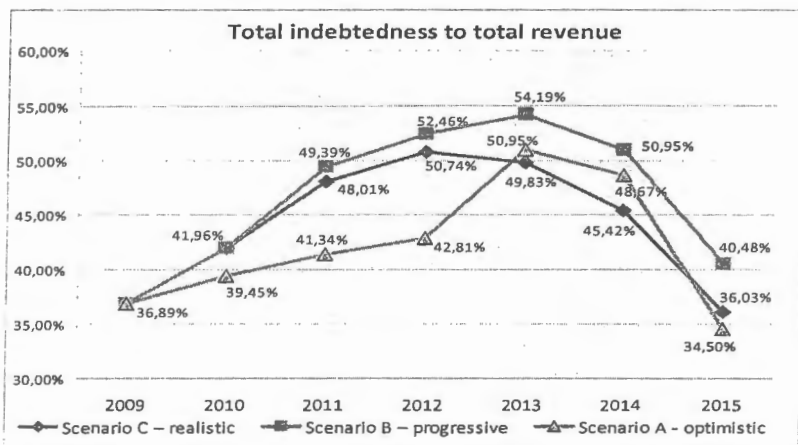
Ryc 13. EU funds for financing investment over 2009-2015 – three scenarios made in 2009



Ryc. 14. Investment expenditure planned for 2009-2015 - three scenarios made in 2009.



Ryc. 15. Indebtedness, in percent of total revenue, for 2009-2015 - three scenarios made in 2009.



Source for figures 13-15: own calculation based on data received from the LG L1

6.3. Public participation

The development of a long-term FP, debt strategy, CIP, and the strategy, as a rule, should be approved by the city council. It is the basis of an efficient financial management. Members of the city council represent local society. However, when working on the strategy and CIP, a wider representation of local citizens is needed. Strategic plans implementation must be worked out in cooperation with LG representatives. For instance it is safer for LG managers to discuss prioritization of investment projects and debt issuance, as well as objectives of the strategy, prior to voting during the council meeting. Involvement of citizens makes the LG managers activity more transparent and accountable and contributes to social development.

7. SUMMARY AND CONCLUSIONS

Local and regional development depends on infrastructure and its quality, as well as on the quality of services offered to local societies. The quality of life and well being of a society in a city, or a region depends on opportunities and quality of education and health care, and on activity opportunities in the area of culture, sport, tourism, and leisure. This vision of a happy society, where everyone would be better off and where the conditions of life would make life of members of the society worthwhile is a basis for undertaking work on strategy of development.

The development of a long-term Financial Plan, with operating elements of long-term debt management, and a long-term CIP, coordinated with the FP, is the basis of a feasible development strategy and efficient financial management. The FP ensures funds for financing investment and other soft programs, which are included in the strategy, and in yearly budgets, determines safe level of debt and increases a probability of acquiring external resources, including EU funds and debt. The long-term FP must be coordinated with yearly budgets. All investment expenditure of the budget should appear in the FP. When investment expenditure in the budget is changed, the FP must be verified.

Implementation of computer models helps construct FP and CIP, enables their prompt construction and verification and contributes to effective management of own and external resources. Thorough financial analyses and credit worthiness assessments it is possible to show that the strategy is financially feasible - all programs and projects can be financed - and the strategy really can be implemented by a LG. The newly issued debt can be below maximum, safe level of debt depending on risk aversion of a LG manager. The FP decreases the risk of wrong decision making and increases a probability of acquiring external resources, including EU funds and debt, and of effective management of these resources. Thus, long-term financial and investment planning contributes to the improvement of public finance management, helps attain strategic objectives of LG development, and facilitates economic growth.

There are three objectives of efficient financial management: determination of proportion between the investment expenditure (resulting from the strategy and the CIP) and the operating expenditure; ensuring current revenues for financing current and delegated tasks; determination, in long term, and each year, of safe level of debt, which ensures budget liquidity and implementation of current tasks. The design of FP and CIP facilitates achievement of these objectives. The resources assigned to financing projects must be consistent with the objectives of the strategy, and the CIP. The above three factors also enhance the necessity and importance of design and operation of the FP and computer tools supporting long-term financial management. LG, consistently with the new pfl, have to determine, over at least 4 year period, the funds required for financing investment and must repay the issued debt and cover cost of servicing it over a long-period. The level of issued debt could be reduced through involvement of private sector in financing public utilities. Development of private- public partnership will make it easier for public sector to continue investment pace, especially after 2015, when EU funds for financing local infrastructure will be lower.

In the paper we presented application of the computer model to FP and CIP analysis in a LG. These analyses give basis to formulation of the statement that, when after 2015 the *gross* operating surplus, creditworthiness, and investment ratio will be maintained, the development strategy formulated until 2020 can be implemented – all project planned until 2010 will be financed.

There is a lot of room for improvement regarding finance and debt management by LG in Poland which can be facilitated by a coordinated actions of the central government (improvement of law) and local governments. The 2009 n-lpf facilitates development of long term planning and finance management. However, efficiency of finance and debt management and of other external resources will maintain of vital importance, in the light of high demand for investment financing.

A good strategy for LG in Poland is to first maximize, and then maintain a high level of investment expenditure. It is recommended to establish a targeted percentage of total annual spending that will be devoted to infrastructure financing, and effectively seek for external resources. In the years to come the winning LG will be those, which will be both effective and efficient in investment financing.

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Streszczenie

Lokalny rozwój społeczno gospodarczy w dużej mierze zależy od rzetelnego opracowania odpowiednich planów i programów, które najczęściej zapisane są w formie tzw. strategii rozwoju. Jej podstawowymi elementami są: wizja funkcjonowania jednostki samorządu terytorialnego (JST), np. gminy w perspektywie kilkunastu lat, jakości życia mieszkańców JST oraz wyznaczenie celów strategicznych, operacyjnych i najważniejszych zadań. Powyższe cele określa się na podstawie analizy SWOT i diagnozy stanu zasobów i finansów JST.

Ważną częścią strategii jest analiza możliwości zabezpieczenia środków, które zapewnią finansowanie programów i zadań (osiągnięcie celów strategii). Analiza możliwości finansowania strategii winna być dokonana poprzez opracowanie Wieloletniego Planu Finansowego (WPF) i związanego z nim Wieloletniego Planu Inwestycyjnego (WPI).

W pracy przedstawiono długoterminową analizę JST, elementy WPI i WPF, z wykorzystaniem wspomaganego komputerowo modelu. Z jego pomocą określa się maksymalne możliwości finansowania inwestycji w okresie ok. 10 lat - maksymalne wydatki inwestycyjne (z uwzględnieniem środków UE) i bezpieczny, ustawowo dopuszczalny poziom długu. Dla każdego roku z tego okresu zapewniona jest płynność budżetu JST oraz zgodność wskaźników zadłużenia (poziomu długu) z przepisami prawa. Pokazano także, że opracowanie kilku scenariuszy WPI i WPF umożliwia ocenę realizacji strategii dla różnych opcji (np. poziomu środków z UE, tempa wzrostu PKB, stopy inflacji) oraz różnych poziomów ryzyka.

Celem WPF i WPI opracowanych przez JST jest maksymalizowanie środków, przede wszystkim z UE, na finansowanie inwestycji, oraz dopasowanie poziomu długu do możliwości zdobycia środków z UE przy równoczesnym zapewnieniu płynności budżetu. Sposób podejmowania decyzji w JST zaprezentowano na przykładzie analizy wieloletnich planów przygotowanych przez JST, odpowiednio, w roku 2007 i 2009.

W czasie ostatnich 20 lat opracowano wiele strategii rozwoju oraz WPF i WPI. Jednakże, bardzo rzadko analizowano możliwości finansowania strategii (zadań należących do WPI). Strategie te były często budowane „na wyrost” i były zbiorem deklaracji i dobrych chęci, podbudowanych analizą SWOT. W pracy pokazano, że WPF i WPI są ważnym elementem strategii, umożliwiają stwierdzenie, że strategia może być sfinansowana, a także mogą być wykorzystane do szybkiego przygotowania korekt budżetu i planów wieloletnich wspierających rozwój gospodarczy.

