Municipal Investments in the Łódź Metropolitan Area (Poland) between 2007 and 2013

Tomasz Napierala, Łódź*

with 8 figures and 3 tables in the text

Content

Summary ....................................................................................................................... 369
1 Introduction ........................................................................................................ 370
2 Methodological framework ........................................................................... 372
3 Ability of long-term municipal planning ....................................................... 374
4 Goals of municipal investments ..................................................................... 376
5 Spatial aspects of municipal investments ...................................................... 378
6 Effectiveness of municipal investments ......................................................... 380
7 Conclusions ...................................................................................................... 383
8 References ......................................................................................................... 384

Summary

The aim of this paper is to analyse municipal expenditures on investments in the Łódź metropolitan area (Central Poland), spent between the years 2007 and 2013 (the previous European Union multi-annual financial framework). The author assessed the quality and completeness of public finance information at a local level. Three types of documents were considered: strategic plans for local development, budget plans, and financial statements. The limitations of using public data on investment expenditure were defined. It should be noted that the task method of budgeting in Polish local governments is secondary to the objective method. Thus, the ability to identify municipal expenditures on individual investments is limited (Napierala & Adamiał 2012).

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1 The author is grateful to Marek Lawin from the Regional Tourist Organisation of the Łódź Region for his engagement in the process of data collection.
The paper illustrates the investment policy of local governments in the Łódź metropolitan area, during the previous European Union multi-annual financial framework. Furthermore, the quality and effectiveness of strategic and budget municipal planning were assessed in the study. The author used his own method of comprehensive analysis of strategic plans for local development, budget plans and financial statements of local governments (NAPIERALA et al. 2013). All planned and executed municipal individual investments were identified and described. The analysis included different types of local governments, representing Łódź (the core city of a metropolitan area), other cities, urban-rural and rural municipalities.

The author outlined the significant differences between strategic plans, operational plans and the execution of municipal investments in the Łódź metropolitan area. Weaknesses of strategic planning for local development and budget planning in the study area were identified. Moreover, the author tried to verify the effectiveness of municipal investments in the studied area. The correlations between municipal expenditures on investments per capita and factors depicting changes in the quality of life in particular municipalities were investigated. The author considered changes in: effectiveness of elementary education (with comparison to educational investments); participation in culture (cultural investments); natural movement corresponding with development of human population (healthcare, sports and recreation investments); protection of the natural environment (investments in water and waste management); the mobility of the local workforce (transportation investments); natural movement and the migration rate comprehensively representing the quality of life (with comparison to municipal investments altogether).

1 Introduction

The main purpose of this research was to evaluate the profitability and effectiveness of the municipal investment expenditures in the Łódź metropolitan area, for the period 2007-2013. This assessment is a complex process, consisting of the verification of: (1) the justification of the investment expenditures by strategic plans for local development; (2) the degree of execution of planned, strategic investment expenditures; (3) the scope of operational decisions regarding municipal investment expenditures, made ad hoc or planned in the short term; and (4) the social, economic, demographic, cultural and environmental effects of the municipal investments under examination.

It should be emphasised that many of the investments being examined could not be completed without European Union (EU) funding. Regional policy in the EU has moved from common fiscal intervention into profound cohesion policy (CHURSKI 2014). As a large part of the investments being examined were co-funded by the European Commission (under the European Social Fund or the European Fund
of Regional Development), the analysis of municipal investments also enabled the author to indirectly investigate the effects of the EU’s cohesion policy at a local level. However, metropolitan areas consist of aggregations of different localities, dependent on local hierarchies, both formal and informal, with locally oriented goals for social development and economic growth (Latham et al. 2010). In addition, local disparities in the dynamics of economic activity refer to the variable distribution of municipal infrastructure, and are the embodiment of globalisation (Czyż 2014).

The area covered by this study is the metropolitan area of Łódź in Central Poland, with an area of 2,499 km². As of the end of 2013, the Łódź metropolitan area was inhabited by 1,096,000 of people, most of whom (711,000) were residents of the city of Łódź. The metropolitan area of Łódź consists of 28 municipalities: the city of Łódź is the core city, along with six additional cities, five urban-rural municipalities, and 16 rural municipalities (see Fig. 1). Metropolitan areas are not official units of the administrative division of Poland. However, the metropolitan area of Łódź is covered by the activities of the association of all the mentioned municipalities, driven by the new European Commission tool known as Integrated Territorial Investments.

Figure 1: Types of municipalities in the metropolitan area of Łódź

Source: Author’s own draft
2 Methodological framework

The evaluation of the profitability and effectiveness of the municipal investments appears to be a complex process. Firstly, it refers to the rational use of available resources to achieve strategic or short-term objectives by the local authorities. Secondly, the evaluation looks at the productivity of municipal investments, as specified by strategic and operational municipal goals. And thirdly, it refers to the efficiency of investments and whether particular strategic or operational objectives were achieved (Filipiak 2011). The first phase of the evaluation of the profitability and effectiveness of the municipal investments in the Łódź metropolitan area has been deliberately omitted. Therefore, only the productivity and efficiency of the investments being investigated were identified. The study tried to determine whether planned strategic investment projects were executed and investment expenditures were carried out. In addition, a further goal of the study was to determine if municipal investments were socially, economically, demographically, culturally, and environmentally useful.

Figure 2: Completeness of data on municipal financial statements for the period 2007-2013 in the Łódź metropolitan area

Source: Author’s analysis based on data obtained from municipal public information bulletins

Budget plans and financial statements constitute the basic source of information for the general evaluation of local government finance policy. The significance of
the availability and quality of this information must be emphasised. Thus, any local authority decision must not be spontaneous and cannot be made without access to and analysis of the investigated information (Filipiak 2011). Two primary meanings of municipal budgets are outlined: (1) a complete program of municipal purposes, referred to planned expenditures and financed by forecasted revenues; (2) a complex tool for controlling municipal expenditures. Consequently, municipal budgets fulfil three functions: strategic management, financial planning, and financial control (Tassonyi 2002).

Under Article 212 (1) of The Law dated 27 August 2009 on Public Finance, municipalities are not required to present detailed and separated information on expenditure estimates for strategic investment purposes within their budget plans. Despite this regulation, this study has found that municipal budget plans usually contain this data. On the other hand, the legal regulations relating to municipal financial reporting do not require detailed information on financial aspects of investment expenditures. Therefore, data for the local governments in the metropolitan area of Łódź is not available (see Fig. 2).

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditures in PLN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated in strategic plans</td>
</tr>
<tr>
<td>Total</td>
<td>15,265,990</td>
</tr>
<tr>
<td>2007</td>
<td>5,077,440</td>
</tr>
<tr>
<td>2008</td>
<td>2,611,937</td>
</tr>
<tr>
<td>2009</td>
<td>2,281,104</td>
</tr>
<tr>
<td>2010</td>
<td>3,230,270</td>
</tr>
<tr>
<td>2011</td>
<td>1,682,024</td>
</tr>
<tr>
<td>2012</td>
<td>340,357</td>
</tr>
</tbody>
</table>

Source: Author’s analysis based on data obtained from municipal public information bulletins.
(municipal revenues and debt); and (2) transparency (incompleteness of data on municipal budget plans and financial statements). Considering the financial factors, according to European Commission requirements, municipal debt is included in the definition of public debt. Municipal expenditures on investments are therefore limited not only by municipal financial resources, but also by the debt policy of the European Commission and individual member states (Pige 1999). The transparency factors refer to incomplete data on municipal budget plans and financial statements. As long as it remains impossible to achieve full traceability of particular investments in the strategic and financial documents of local governments, there will be a discrepancy between the identified and real values of municipal investment expenditures. It should be noted that this divergence may affect some of the empirical findings of this paper.

3 Ability of long-term municipal planning

The problems of municipal budgeting in countries in transition were recognised by Pige (1999). She considered a lack of strategic planning, a lack of transparency, and even a lack of accountability (see Table 2). Sadly, this study also identified many of the issues considered by Pige (1999) as existing in the municipalities in the metropolitan area of Łódź.

Table 2: Problems in public expenditure management at the local level in countries in transition

<table>
<thead>
<tr>
<th>Lack of strategic planning</th>
<th>Lack of accountability</th>
<th>Lack of transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td>← across sectors</td>
<td>← in the medium-term</td>
<td>← in the functions</td>
</tr>
<tr>
<td>← across investment</td>
<td>← effects of budget</td>
<td>← in the functions</td>
</tr>
<tr>
<td>projects</td>
<td>← decisions</td>
<td>← of the municipality</td>
</tr>
<tr>
<td>← across budgetary</td>
<td>← in commitments and</td>
<td>← in the budget</td>
</tr>
<tr>
<td>institutions and</td>
<td>← expenditure outlays</td>
<td>classification</td>
</tr>
<tr>
<td>funds</td>
<td>← in cash and resource</td>
<td>← in decentralised</td>
</tr>
<tr>
<td>← across fiscal years</td>
<td>← management</td>
<td>decision-making</td>
</tr>
<tr>
<td></td>
<td>← in monitoring and</td>
<td>processes (at</td>
</tr>
<tr>
<td></td>
<td>← control</td>
<td>the level of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>budgetary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>institutions)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>← in revenue and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>expenditure</td>
</tr>
<tr>
<td></td>
<td></td>
<td>figures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>← in local financial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>transactions and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>accounts</td>
</tr>
</tbody>
</table>

Source: Pige 1999, p. 46
Practical implementation of up-to-date budgeting methods is strongly limited in municipal offices in Poland (NAPIERALA & ADAMIAK 2012; NAPIERALA & LAWIN 2012). This stems from the fact that local authorities consider modern budgeting methods to be inconsistent with political goals and discordant with the electoral timetable (FILIPIAK 2011). The difficulties of implementing task budgeting were investigated by TASSONYI (2002). He identified the break in the link between two municipal structures: strategic planning and administration. Municipal administrators are usually charged with preparing both incremental budgets and task budgets. Implementing task budgeting therefore requires a significant workload for highly qualified administrators. Additionally, the issues of utility and the applicability of economic analysis need to be recognised. Despite the difficulties discussed above, task budgeting does now seem to be standard in municipal budgeting (TASSONYI 2002).

Figure 3: Value of municipal strategic investment expenditures, planned for the 2007-2013 period in the Łódź metropolitan area, per capita

![Bar Chart]

Source: Author’s analysis based on data obtained from municipal public information bulletins

It is argued that infrastructural municipal investments have a long-term and strategic character. The investments under discussion are: (1) associated with changes in the size and quality of municipal infrastructure; (2) aimed at the acquisition of land under the development and modernisation of municipal infrastructure; (3) equivalent with acquisition of financial assets applied to cover the costs of development and
modernisation of municipal infrastructure in the future. Improving the competitive advantage of municipalities occurs primarily through appropriate investment decisions (Filipiak 2011). It should be noted that the value of the strategic investments planned by local authorities in the Łódź metropolitan area for the 2007-2013 period was not constant. The data for the year 2007 had to be excluded from the analysis. In most municipalities in the metropolitan area of Łódź, strategic plans for the investigated multi-annual financial framework were initiated in the year 2008. It is worth stressing that most of the expenditures on strategic investments were planned to be executed during the first three years of the period under examination (2008-2010), particularly in the case of rural and urban-rural municipalities (see Fig. 3). Thus, the seven year perspective of the strategic planning was revealed as too long for the local authorities in the Łódź metropolitan area.

The difference between two phenomena must be noted: the impact of the political cycle on the municipal budget plan, and the use of the municipal budget plan as a strategic political tool. However, it was revealed that municipal investment expenditures significantly increase in the electoral year and in the year before elections (Veiga & Veiga 2014). Higher municipal expenditures and lower local tax revenues in the electoral years usually result in a higher municipal deficit. Moreover, this increase of expenditures is the result of excessive increase of current results. While capital expenditures on strategic municipal investments may become less significant (Sakurai & Menezes-Filho 2011). The above findings were confirmed by this study. During the multi-annual financial framework investigated, municipal elections were held in 2010. It should be noted that in that electoral year, and in the year 2009, implementation of strategic investments significantly increased. During the years 2009-2010, local authorities in the metropolitan area of Łódź decided to carry out 56% of the total value of expenditures on implemented strategic plans for the 2007-2013 period. In addition, expenditures on previously unplanned investments also substantially increased. During the years 2009-2010, 49% of unplanned expenditures for this multi-annual financial framework were executed.

4 Goals of municipal investments

Significant demographic changes were observed in the metropolitan area of Łódź during the last decade. Firstly, the number of inhabitants of the core city decreased. Secondly, uncontrolled suburbanisation and urban sprawl increased, as it did in other metropolitan areas in Central European countries in transition (Pichler-Milanović 2010). However, the Łódź metropolitan area seems to be a unique example of a metropolis with a declining population. This makes municipal spatial planning and local government policy on investment expenditures even more strategic in the Łódź metropolitan area than in other functional areas in Poland.
Figure 4: **Goals of municipal investment expenditures, executed in the years 2007-2013 in the Łódź metropolitan area**

![Diagram showing expenditures in different areas](image)

Source: Author’s analysis based on data obtained from municipal public information bulletins

Kozak (2012) reported significant discordance between the structure of the goals of planned and executed strategic plans for previous multi-annual financial frameworks (2004-2006 and 2007-2013) at a national and regional level in Poland. On the one hand, strategic plans were oriented for development defined in a modern manner. On the other, implementation of the discussed plans was focused on hard infrastructure. The structure of the objectives of municipal investment expenditures became widely affected by these national and regional tendencies – a situation confirmed by this study in the case of the municipalities in the Łódź metropolitan area (see Fig. 4).

During the last decade of the 20th century significant changes in the value and structure of municipal expenditures occurred in the Central European countries in transition. Education, and water and waste management became the most substantial goals of local government investments (Nam & Parsche 2011). Water and waste management infrastructure, alongside communication and energy facilities, are a notable part of technical infrastructure. It establishes conditions for development and determines the quality of life of inhabitants. It must be noted that in the region of Łódź, before the investigated multi-annual financial framework, only very few inhabitants in rural areas had access to sewer systems. On the contrary, the water supply to rural
areas in the Łódź region was around 94% in 2005 (HYSKI 2007). These facts affected the size and structure of expenditures on water and waste management infrastructure in the Łódź metropolitan area.

The processes of urban sprawl and suburbanisation have had a significant impact on the principles of investment expenditure for the core city of the metropolis. Uncontrolled suburbanisation and the declining population of the core city substantially reduce the municipality’s revenues. In addition, as a result of urban sprawl, more and more services and facilities are provided in the core city for the inhabitants of the suburbs and periphery of the metropolis (SAJNAJ 2014). Thus, the transport network needs to be developed, and public transport and the road network become significant targets for municipal investment expenditure. It should be noted that in the municipalities of the Łódź metropolitan area, expenses on public transport and the road network accounted for 33% of strategic, and 37% of operational investment expenditure.

5 Spatial aspects of municipal investments

Autonomy of local governments has both a positive and negative impact on investment expenditure. On the one hand, there is considerable potential for municipalities to use their investments as a key element of local development, based on local resources and generating local revenues. On the other, this autonomy makes cooperation between municipalities (essential for metropolitan areas) very difficult to achieve (ACIOLY Jr. 2001). Therefore, the spatial analysis of expenditure on municipal investments are revealed as a significant tool in the evaluation of local development in the Łódź metropolitan area. As municipal investment expenditures per capita are similar for all municipalities (or higher for underdeveloped ones), the local dimension of the cohesion policy can be positively assessed.

Some of the municipalities in the metropolitan area of Łódź planned extremely high expenditures on strategic investments in the 2007-2013 period. The value of the investigated investments exceeded 20,000 PLN per capita in the Tuszyń municipality. However, most of the strategic plans were overestimated. Therefore, on average only approximately 25% of discussed expenditures in the municipalities with the highest value of planned strategic investments were actually carried out. In addition, attention should also be paid to the municipalities with an underestimated value of strategic investments. In these cases more than 100% of the planned expenditures were actually executed (see Fig. 6). The authorities of some municipalities in the Łódź metropolitan area were not able to plan their investments in a strategic manner. In a few municipalities (represented by dark polygons in Fig. 7) the vast majority of the investment decisions were of a short-term nature.
Figure 5: **Value of municipal strategic investment expenditures, planned for the 2007-2013 period in the Łódź metropolitan area, per capita**

Source: Author’s analysis based on data obtained from municipal public information bulletins

Figure 6: **Execution of municipal strategic investment expenditures in the years 2007-2013 in the Łódź metropolitan area**

Source: Author’s analysis based on data obtained from municipal public information bulletins
These findings should be cautiously interpreted. The assumptions refer to the values of executed expenditures, both strategic and operational but, as discussed above, data can often be incomplete. In the case of several of the municipalities, no financial statements were available to identify expenditures on individual investment projects. This was mainly an issue in the rural municipalities (Dłutów, Głowno, and Brzeziny). However, a lack of detailed financial statements was also recorded in the case of one urban municipality (Pabianice).

6 Effectiveness of municipal investments

Public intervention on local development is very challenging in countries in transition. It is influenced by various factors, both local and regional, and by various processes linked with socio-economic transformation (KOZAK 2012). According to the assumptions of the European Commission’s cohesion policy, development must be explained using intangible characteristics like human capital, social capital, culture, innovations, knowledge, entrepreneurship, and networking – rather than traditional economic growth. Moreover, metropolises are areas of concentration of development displaying these intangible characteristics (KOZAK 2012). Therefore, the executed municipal investment expenditures, which have been investigated (see Fig. 8) should be
reflected in the values of the indicators used to illustrate these intangible characteristics (see Table 3).

Figure 8: Value of all executed municipal investments in the years 2007-2013 in the Łódź metropolitan area, per capita

Source: Author’s analysis based on data obtained from municipal public information bulletins

It is widely discussed (Będziszak 2013; Radó 2010) that there is no evidence of a simple correlation between municipal expenditures on education, both current and capital, and school effectiveness. Therefore, increasing educational infrastructural investments or teacher salaries will not result in an increase in the achievement levels of students. However, investigating primary school test results seems to be the only method of examining the effectiveness of municipal investment expenditures on educational infrastructure. Infrastructural municipal investments into the public transport system and the road network are expected to increase the mobility of the local workforce. Furthermore, the distribution and relocation of workplaces may become a reality, and commuter flows can be changed. In the most developed metropolitan regions, some suburb-to-city travel patterns can be replaced by suburb-to-suburb ones (Korcelli et al. 2012). Currently, as a result of the European Commission policy on improving energy efficiency, significant growth in municipal investment expenditures on renewable energy sources is expected (Żolyniak 2011).

The quality of life in the metropolitan area can be referred to as liveability, understood as the attractiveness of the metropolitan region to existing and potential...
inhabitants. It should be highlighted that improving the liveability of the metropolis can be achieved by redesigning the metropolitan area, based on appropriate municipal infrastructure investments (Kotler et al. 1993). It is argued that the level of development of the population can be described by natural movement and migration. This level of development is also integrally linked with the value of human and social capital, and the quality of life of the inhabitants of an area (Krupickaite et al. 2014). Furthermore, population dynamics are understood as significant determinants of economic development and related social change (Korcelli et al. 2012).

Liu (1975) discussed common interpretations of the term quality of life. He noticed that two types of factors, the physical (e.g. quantifiable goods, services, material wealth) and the spiritual (e.g. sense of community, esteem, self-actualisation, love, affection), should be recognised in the definition of this term. As a result of his own study, Liu verified whether changes in quality of life could be employed as a statistically significant predictor of the net migration rate. Findings from Liu’s study enabled the author of this paper to discuss the spatial variation of the net migration rate in the Łódź metropolitan area, as the result of the spatial differentiation of the value of municipal investment expenditures. However, the assumption has to be made that municipal investments improve the quality of life of inhabitants.

Table 3: Effectiveness of executed municipal investment expenditures in the years 2007-2013 in the the Łódź metropolitan area

<table>
<thead>
<tr>
<th>Goal of municipal investment expenditures</th>
<th>Total value of municipal investment expenditures on particular goal per capita was correlated with trend rate of:</th>
<th>Pearson correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>All investments</td>
</tr>
<tr>
<td>Education</td>
<td>The average result of primary school test (unit: pts.)</td>
<td>0.058</td>
</tr>
<tr>
<td>Culture</td>
<td>Library loans per borrower (unit: vol.)</td>
<td>0.160</td>
</tr>
<tr>
<td>Healthcare, sports and recreation</td>
<td>Birth rate (unit: per 1,000 inhabitants)</td>
<td>–0.052</td>
</tr>
<tr>
<td>Water and waste management</td>
<td>Population connected to wastewater-treatment plants (unit: per 1,000 inhabitants)</td>
<td>–0.041</td>
</tr>
<tr>
<td>Transportation</td>
<td>Share of the registered unemployed persons in the population in the working age (unit: percent)</td>
<td>0.326</td>
</tr>
<tr>
<td>Total</td>
<td>Net migration rate (unit: per 1,000 inhabitants)</td>
<td>0.153</td>
</tr>
</tbody>
</table>

Source: Author’s analysis based on data obtained from public information bulletins of municipalities, Central Statistical Office of Poland, and Regional Examination Board in Łódź (Reports on the results of primary school tests, 2007-2013)
For each municipality, the trend rates of variables depicting the various goals of municipal investment expenditures have been estimated. These trend rates were then correlated with the total values of municipal investment expenditures on particular goals per capita. It must be stressed that all of the investigated correlations were statistically insignificant, and even incorrect, like the positive impact of municipal investments on unemployment. Three reasons for such results could be: (1) incomplete financial statements; (2) the impact of regional, national or European trends on local phenomena; and (3) the inability of strategic municipal planning.

7 Conclusions

This paper has presented findings from the results of research on the productivity and efficiency of municipal investment expenditure in the metropolitan area of Łódź. Firstly, the incomplete data on budget plans and financial statements was investigated, and the impact these deficiencies have had on the results of the analysis was discussed. The research revealed the low effectiveness of municipal investment expenditures. Furthermore, local authorities’ dislike of strategic municipal investment management was pointed out. Finally, indicators of efficiency of municipal investment expenditures, both total, and on particular goals like education, culture, healthcare, sports and recreation, transportation, water and waste management, were examined.

Local authorities in the metropolitan area of Łódź seem to be unable to execute expenditures on infrastructural investments in a strategic manner. They are unable to effectively plan investment expenditures for a seven-year period, particularly in urban-rural and rural municipalities. Strategic and operational investment decisions are significantly affected by the electoral timetable of municipal regimes. Moreover, local authorities in the Łódź metropolitan area are not eager to present detailed financial statements relating to the execution of expenditures on municipal infrastructural investments. In addition, the spatial distribution of municipal investment expenditures does not correlate with the spatial diversity of variables referring to the quality of life, and it does not therefore correspond with cohesion policy at a local level. However, further in-depth studies on productivity and efficiency of municipal investment expenditures need to be carried out.
8 References


