PROBLEMY EKOROZWOJU – PROBLEMS OF SUSTAINABLE DEVELOPMENT
2017, vol. 12, no 1, 79-90

Rationalisation of Investment Decisions in the Sustainable Management of Urban Development – is a New Paradigm Needed?

Racjonalizacja decyzji inwestycyjnych w zrównoważonym zarządzaniu rozwojem miast – czy jest potrzebny nowy paradygmat?

Anna Wojewnik-Filipkowska

University of Gdańsk, Faculty of Management, Department of Investment and Real Estate,
ul. Armii Krajowej 101, 81-824 Sopot, Poland
E-mail: anna.filipkowska@ug.edu.pl

Abstract

The management of dynamic and complex urban systems can no longer be driven by the sustainability aim alone and the concept of *New Public Management* is not more sufficient in conditions of financial constraints, growing needs, growing social awareness and expectations relating participation, citizenship, and public accountability. The general aim of the paper is to bring different concepts together to propose a new approach to investment decision making in urban development in order to support cities on both strategic and operational level. The rationalisation of investment decisions in the management of urban development requires acceptance of a new paradigm combining ideas of sustainable development and smart city, triad of *creativity – circularisation – synergy*, stakeholder theory, and social responsibility. The rationalisation requires also application of multi-criteria analysis which takes into account *cross* nature of investment in urban development. The proposed approach may be a theoretical reference for the subsequent methodological research and also managerial applications relating urban development projects. It can be then useful for public managers and provide support for decision making. The innovative approach of the research is not based on inventing new ideas from the scratch. It concerns application of already known concepts and theories which are necessary to create a new paradigm consistent with the known facts. The research is based on a critical literature review.

Key words: sustainable development, smart city, urban development, public management, planning, investment evaluation

Streszczenie

W warunkach ograniczeń finansowych, rosnących potrzeb i świadomości oraz oczekiwań w zakresie uczestnictwa, obywatelstwa i publicznej odpowiedzialności, zarządzanie dynamicznym i złożonym systemem miejskim według koncepcji rozwoju zrównoważonego i zgodnie z zasadami *New Public Managment* (nowego zarzadzania publicznego), jest już niewystarczające. Głównym celem artykułu jest synteza różnych koncepcji, tak by na ich bazie zaproponować nowe podejście wspierające podejmowanie decyzji inwestycyjnych zarówno na poziomie strategicznym i operacyjnym. Racjonalizacja decyzji inwestycyjnych w zakresie zarządzania rozwojem miast wymaga akceptacji nowego paradygmatu łączącego idee zrównoważonego rozwoju i inteligentnego miasta, triady *creativity – circularisation – synergy (kreatywność – cyrkulacja – synergia)*, teorii interesariuszy i odpowiedzialności społecznej. Racjonalizacja wymaga również zastosowania analizy wielokryterialnej, która uwzględnia dwojaki charakter inwestycji w rozwoju miasta. Proponowane podejście może być teoretycznym odniesieniem dla dalszych badań metodologicznych, a także może znaleźć zastosowanie w zarządzaniu projektami w rozwoju miasta. Kon-

cepcja, dostarczając wsparcia w procesie decyzyjnym, może więc być użyteczna dla menedżerów w sektorze publicznym. Innowacyjność rozwiązania nie opiera się na stworzeniu nowej koncepcji od podstaw. Polega na zastosowaniu pojęć i teorii znanych, które są niezbędne, aby stworzyć nowy paradygmat, zgodnych z faktami. Artykuł opiera się na krytycznym przeglądzie literatury.

Słowa kluczowe: zrównoważony rozwój, inteligentne miasta, rozwój miasta, zarządzanie publiczne, planowanie, ocena inwestycji

1. Introduction – research justification, aim and methodology

Urbanisation is believed to be an area of significant civilizational changes), as the future of humankind is linked with cities. No more than 5% of the world population lived in the cities in 18th century, while today it is more than 50%, and United Nations forecasts (2014a) that more than 80% of the population will live in urban area by the end of this century. That determine necessity of cities development and re-development. The city development/re-development management relates to use of scares resources and transformation of the existing state to desired one. The management relates to economic, social, technological, and natural systems. The city development and investment management means space management as city is both a physical place of paths and buildings, and also a space of values, beliefs, and relations. The general aim of the city development management is to ensure sustainable development which is manifested by an increase in national income, qualitative changes in the structure of the economy, availability of goods and services for citizens, better standard of living. But translating this concept into action is a challenge. On the strategic level the management means outlining goals at future requirements. It is master planning on the tactical level, and finally, planning, implementation, and evaluation of urban development project on the operational level (Girard, Nijkamp, 1997). The first step, at the strategic level, is to improve competitiveness. At the level of master planning, evaluation mainly focus on land use choices. Finally, on the operational management level, evaluation refers to new investment projects. It is the public sector who is by law responsible for the urban economy as all levels. That is why management relates also to the institutional level. Then, government strategies must provide effective public resources management with respect to the sustainable development which means allocating their resources among different goals (projects) rationally. When the sudden credit crisis from 2008 and the subsequent recession in many national economies happened, new challenges for cities and policy makers arose across the world (Flint, Raco, 2012). The city strategies and planning assumptions were challenged as the prosperity were downsized, and the private and public sector investment became more constrained. A new situation connected with public finance consolidation emerged (Ministry of Economy, 2012) and it has been shaping the determinants of investment management and criteria for their evaluation since then.

The paper focuses on the investment decision in the management of the urban development and is justified by the necessity of scarce resources rationalisation which is a principle of sustainable development. The scarce resources relates to natural environment resources, space within the cities, financial resources, and the creative capital of the city as well. The sustainability then relates to balance between economic, social, technical, and natural systems. Talking about build environment, the balance relates to satisfying needs concerning different types of infrastructure and investment, too. In the wider context, it relates to balance between *hard* components and *soft* values. In consequence, cities have to act much smarter in using the existing capacities and resources. These call for changes in the investment planning and evaluation. The problem is intensified by the absence of proper organisational structures, processes of reforms in the public sector administration, and growing civil society. These call for organisational changes as management relates also to institutional level. Therefore, the management of the dynamic and complex urban systems can no longer be driven by the sustainability principle and New Public Management concept alone.

The thesis of the paper states that in order to ensure sustainable development in four dimensions (in relation to resources; in relation to economic growth, social justice and protection of environment; in relation to different types of the infrastructure; and in relation to *hard* and *soft* component), the management of city investment must be accompanied by idea the of smart development, concept *of creativity – circulation – synergy*, and social responsibility, with respect to all stakeholders.

The second section of the paper presents literature review relating investment management in the public and private sector to picture the background for the research. The interactions between the sectors gave rise to new concepts.

In the third part of the paper the framework of decision making rationality on strategic level is described. The proposed new approach to the investment decision making rationality in urban development is the starting point to make a breakthrough in the city investment management. The proposition combines ideas of the sustainable development and smart cities. Additionally, the principles of creativity, circularization, and synergy, adopted from L. F. Girard (2011), are included. Those principles are in

line with the old concept of P. Geddes (1915) who interpreted city an organism in evolution. Next, stakeholder theory and renewed social responsibility are encompassed as well. The connections between mentioned concepts in the relation to the proposed approach are explained. The fourth section transfers the concept on the operational level. The paper is closed with conclusions which also includes identification of a new type of *cross* investment as a consequence of the proposed approach.

The paper offers an insights into the public investment management, emphasises the role of the investment planning and evaluation to enhance sustainability and smartness of the city. It is in line with other recent studies relating public management and focuses on the search of new approach to investment management in urban development. The proposed approach may be viewed as a theoretical reference for the future methodological and operational applications relating urban development projects. It can be then useful for public managers and provide support for decision making in that area.

The research is based on a literature review. For study justification, reports relating public finance and urbanisation were studied. For the conceptual part of the research, the literature of public sector management, business management, and investment management were also studied.

2. Literature review – public versus business management

Significant achievements of the economic science in the field of business management have provided an incentive to use this field in local government (municipal) investment management. Still, a new stream of economic knowledge is under-utilised in the field of municipal investment. The category of public real estate development is often separated from the category of private real estate development and the public sector is alienated from the private. The identified gaps concerns strategy, portfolio, finance, organisation (Wojewnik-Filipkowska, Rymarzak, Lausberg, 2015). The approach to public management, as to the business management, is not easy because of the specific sources of public investment financing, but also due to the specific nature of the effects created by the public investment. These effects are not easily measured in terms of money, and verifying their quality encounters significant difficulties. According to R. P. Appleby (1949) there are three important aspects which make the public management different from business management: the political character, the impact, and public accountability. J. Stamp (1923) adds principle of uniformity, external financial control, and service motive. P. F. Drucker points out (1973): needs, values, objectives, contribution, and measurement as differences. H. Simone (1946) said that the public administration is bureaucratic, political, and characterized by *red-tape*, while private administration is more business-line, non-political, and free of *red-tape*. Particularly, the public and private sectors are definitely diverse in case of their investment aims (Atkinskon, Stiglitz, 1980; Boland, Flowler, 2000; Alford, 2001). Traditionally, the public sector has had social (public) aims and the private sector has had financial (commercial) aims, but, all in all, both sectors play important roles in city development. So, despite mentioned differences, in many developed countries, current trends of the theory of business have penetrated into other spheres of the economy and society, and public administration have been deeply transformed especially in modern economies. There is growing interest in strategic management in the public sector despite the implementation challenges (Bouckaert, 1993; Chan, 1999; Poistert, Streib, 1999; Yang, 2007; Sienkiewicz, 2013), while twenty years ago, managerial topics were not discussed in public management, at all (Wojewnik-Filipkowska, Rymarzak, Lausberg, 2015). The more developed and mature country's economy, especially its capital market, the faster the process of contemporary economic trends dissemination. The sphere of the infrastructure investments is also involved. For instance, the United Kingdom is the leading country in terms of implementing private sector achievements in the public sector through public private partnership (HM Treasury, 2012). According to O. Kaganova (2011) some solutions and practices can be transferred across countries with respect to country culture, tradition, and law. The public sector can learn from the private sector's best practices in real estate asset management for instance (Phelps, 2010; White; 2011; Hirigoyen, Laouer, 2013) but simultaneously business process reengineering in public sector has been criticised (Halachmi, 1996; Radnor, Osborne, 2013). It means that public sector investment management requires continuous research for new solutions and new approaches. It was already in the eighties of 20th century, when *the group of ideas known as New Public Management* (NPM) emerged (Hood, 1991, p. 3). Since then, despite some critiques, NPM has been a concept implemented globally to make the public sector more business-like (Box et al., 2001). NPM, known also as a market management, borrows a number of solutions typical for the market economy and the private sector and adapts them to the public sector. The solutions are: managerial approach, results orientation, decentralisation, privatisation and outsourcing, focus on manager's personal responsibility, flexible employment, work organisation and structures, as well as improvement of asset management, efficiency and effectiveness (Andrisani, Hakim, Savas, 2002). Other terms that have been used to describe the NPM model include: (public) managerialism, market-based public administration, entrepreneurial government, and business-like management. And just after NPM became a worldwide phenomenon, we have to move beyond, as pointed

out by several authors (Stoker, 2006; Osborne, 2010; Bryson, Crosby, Bloomberg, 2014; Fisher, 2014; Kalambokidis, 2014). According to J. M. Bryson et al. (2014, p. 445): *The new movement is a response to the challenges of a networked, multisector, no-one-wholly-in-charge world and to the shortcomings of previous public administration approaches*. Furthermore, values of democracy are getting more important than efficiency and effectiveness. Citizens, all together with business and non-profit organizations, are becoming active public solvers, while government must remain a guarantor of public values.

3. Decision making rationality of investment in city development – new approach (strategic level)

Based on the development of traditional public administration and business management dimension of NPM, a new approach to rationality of investment management in city development must be recognised and focused on the impact and future. There are three interconnected *threads* forming the emerging approach. Firstly, as stated in thesis, the emerging approach should incorporate the concept of sustainable development and smart cities. Furthermore, the principles of creativity, circularization, and synergy, must be included. Finally, stakeholder theory and principles of social responsibility, must be taken into consideration. These concepts are not new in public sector however their combination may become a reference for the methodological and strategic applications concerning urban development projects.

3.1. Sustainable (and) smart development

Sustainability is an area of increasing focus for policymakers (Zeemering 2009; Nijaki, Worrel, 2012). Sustainable development is a *development that meets the needs of the present without compromising the ability of future generations to meet their own needs* (WCED, 1987, p. 16). In other words, sustainable development means that the needs of the current and future generations are balanced. The term focuses on the *needs* – however might be defined. According to United Nations (2014b) it comprises 169 goals and targets within 17 directions, while for instance M. Leźnicki and A. Lewandowska (2016) distinguish 21 aspects in 3 dimensions. Recently however there has been a shift towards *rights*. Therefore, sustainable development should be interpreted in terms of *integrated* order: *pursuing economic growth as well as protecting our natural capital and promoting social justice* (Eurostat, 2015, p. 4).

In reference to sustainable investment management, it can be subtracted, that the balance between different types of infrastructure investment is needed. Traditionally, the infrastructure comprised of economic (technical) and social infrastructure. Economic infrastructure includes development relating to energy, transportation and communication, water and sewage. Social infrastructure embraces social system (education, culture, health, social service and recreation) and institutional system (public order and administration, e.g. justice, police, army, and prison). Taking into consideration public and private investment in the build environment and city smart development, we have to distinguish the third type of infrastructure. It relates to institutional support for business environment. The infrastructure of business environment includes special investment zones, science parks, centres of technology transfer, incubators. Based then on the mentioned description relating sustainability, two dimensions of sustainable development can be identified: as a balance between economic, social and natural systems; and secondly, as balance between social, economic (technical), and business environment infrastructure. In a richer meaning, the sustainable development relates to *hard* component (e.g. number of jobs created) and *soft* values (e.g. value of land scape). According to L. F. Girard (2013) the development of *soft* components has not been up with *hard* values as large economies got richer but produced negative effects such as ecologic poverty, unevenly effective education and health care system, deepening inequalities, a stagnant middle class. Finally, the fourth dimension of sustainability means that the balance between different resources/capital (natural, economic, human, and social) must be achieved.

These restricted resources, in particular social and human capital, connect the concept of sustainable development and smart development. It means that cities (by their social and human capital) in their sustainable development, have to act smarter. However *smart* development is not based only on innovative technologies (Girard, 2013), as intuitively it might be concerned. The prime association is innovative (smart) technology. So yes – smart city is to promote the use of modern technology in everyday urban life, for instance transport technologies which improve the urban traffic and the inhabitants' mobility. In the relation between the city government, administration and citizens – *smart* often means the employment of new channels of communication (e.g. e-government). In association with economy or jobs, *smart* is related to business of information and communication technologies (ICT) and business parks creation. But as the term *smart city* has been widely used in urban planning literature and urban research, but it is not presented in a holistic way (Giffinger, 2007). It comprises various aspects. *Smart* relates also to education, security, green, efficient & sustainable energy. According to study by R. Giffinger et al. (2007), the concept of smart cities embraces following smart aspects: economy (competitiveness), people (social and human capital), governance (participation), mobility (transport and ICT), environment (natural resources), and living (quality of life). M. J.

Dixon (2012, p. 2) can be cited to confirm the connection of the concept of smart cities and sustainable development: *Instead of striving for physical growth, a city's success today should be measured by how wisely it uses energy, water, and other resources, how well it maintains a high quality of life for its people, and how smart it is in building prosperity on a sustainable foundation*. In other words, smart city concept embraces social and human capital aspects (the *source* of *smartness*), and sustainability (Hollands, 2008). Then, it can be claimed that the concepts of sustainable and smart development are inter-related and inter-connected and a term of sustainable smart development is justified. The triple helix model of smart cities performance proposed by P. Lombardi et al. (2011), including human and social relations, confirms the observation of smart and sustainable connection.

3.2. Creativity, circularization and synergy

As explained above, in reference to sustainability in terms of resources, social and human capital is a resource that must be balanced. In reference to smart city – human and social capital are a part of a smart city aspects and the source of creativity. Social and human capital is then an important connection between sustainable smart development and creativity in the *synergy – creativity – circularization* triad. Creativity is an immaterial capital of all inhabitants which enables cities to face the economic challenges, environmental crisis, urban marginality and poverty, growth of inequalities. The creative capital is an asset which reflects citizens' lifestyles, their relationships, and economic performances. It can take a form of new financial and institutional systems, architectural and planning re-design of the city, new technologies, and innovative networks among public, private and civic sectors. Creativity means also integrating old values into a modern vision. It also means integration of objectives of economic, social and ecological performance. Therefore is allows to overcome the traditional trade-off and achieve win-win solution. Creativity enables self-organization capacity, too, and therefore a continuous creation of new opportunities which is a condition for in-side city resilience is possible (Girard, 2011).

The circular opportunity of urban regeneration in the development process is then enabled particularly due to creativity (Zeleny, 2010; Girard, 2011). As urban regeneration calls for re-use and recycle of resources, circularisation is also in line with *ecological* sustainability. There is an evidence of good practices relating cultural heritage and recreation which become an important local development resource in the economic regeneration process (Girard, 2011). The circulation relates also to urban resilience understood as a capability to survive different crises or sustain competitive advantage (Simmie, Martin, 2010). According to J. Bloesch et al. (2015), the concept of resilience integrates sustainable development. M. Baron (2012) lists several perspectives within urban resilience: technical (infrastructural), economic (financial), social, natural. The circulation relates also to *value* which circulates around the city and layers of city governance (Ravetz, 2011). The layers relate among others to economic, social and technological decision making. Decision makers will get involved in the urban development, if it offers them value. The circulation of the value is possible due to different understanding of the *value* which corresponds with different understanding of needs.

Finally, the principle of synergy applies to interrelations of city systems: urban, economic, social, cultural, political, ecological, and governmental. Each of the systems are interconnected and synergies opportunities (value-added) appears beyond boundaries. For instance, the *urban – economic – social* synergy can be in the following path: *urban climate policy – spatial planning – creative regeneration – building design – resource recycling – sustainable consumption – prosperity & well-being – community development – social synergy* (Ravetz, 2011). According to the principle of synergy, the process of management and eventually the quality of this space depends also on synergies among various actors (stakeholders). The residents, users, administration, visitors, industry are the main stakeholders. Each of them however, sees the space and its value differently, as stated above, but the sustainable smart approach allows to avoid trade-offs between their aims according to stakeholders' power, legitimacy, and urgency which will determine their impact over urban development.

3.3. Stakeholder theory and social-business responsibility

According to the triad *creativity – circularization – synergy*, different understanding of *value* allows its circularisation. J. M. Bryson et al. (2014) claim that this heterogeneity is a result of the perspective adopted by the stakeholder, for whom a given benefit is available. So stakeholders must be components of the triad. Inhabitants are no longer simply voters or clients, but are also co-decision-makers, contributing to the creation of common wealth. Therefore, an effective urban development policy is a result of decisions made by specialists, with due attention paid to a wide range of social groups, their participation and engagement. The stakeholder theory emerged in this context (Freeman, 1984). A stakeholder is anyone who significantly influences decision-making or is affected by the decisions made. Stakeholders' power is determined by whether the stakeholder can influence other parties to make decisions which that party would not otherwise made. The legitimacy means that the stakeholder has a legal, moral, or other recognized claim that can influence the organization's

decision, behaviour, process or outcome. Finally, urgency, requires organizations to respond to stakeholder claims in a timely manner (Mitchell, Agle, Wood, 1997). Participation of the stakeholders is the central issue of our time (Jones, 2003). M. Lyons et al. (2001) argue that empowerment will develop if people receive training. Then, fully empowered people and/or communities will be able to contribute towards sustainable development.

A. Pawłowski (2008) provides evidence that principle of sustainable development is a principle of differential responsibility. And so the social responsibility is a concept in which social and environmental criteria are voluntarily taken into account in business operations and relations with interested parties (stakeholders) (Commission of the European Communities, 2001). From the perspective of investment in city development, the concept will be renamed as social-business responsibility, as also public sector (socially focused), has to take under consideration business aspects. There are three aspects within the responsibility concept that should be distinguished (Fontaine, Haarman, Schmid, 2006). They form a *bridge* between public sector (administration and citizen) and business. The first aspect relates promotion of ethics in business. Decision-making should regard the needs of future generations (the sustainable development aspect). It imposes a moral obligation on business to operate ethically. The second aspect states that business and public sector both represent the same interests, differing only in their organisation. According to the third aspect, public administration is obliged to take into account expectations of all the stakeholders.

Although social responsibility and sustainable development concepts are based on different theoretical grounds, they both aim to improve the life quality. The concept of social-business responsibility can then contribute to creation of creativity, support city resilience, and finally, sustainable smart development.

Concluding the section over concept and theories constituting new paradigm, there are principles for rational decision making in public investment: sustainable development, smart development, creativity – circularisation – synergy triad, stakeholder theory, and social-business responsibility. *The smart sustainable city is a city where economic, social and environmental values are achieved in an efficient and balanced way, able to last over time. A general characteristic of a smart sustainable city is the capacity to contribute to closing the flows of resources through circularized processes, and to activate synergies between actors or institutions in a win-win perspective* (Girard, 2013, p. 4333). Furthermore, *A smart sustainable city (SSC) is an innovative city that uses information and communication technologies (ICTs) and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social and environmental aspects* (ITU, 2014, p. 13). The creativity – circularization – synergy triad constitutes the principles, too, although it is not clear whether creativity activates synergistic and circular approach, or synergistic and circular approach activate creativity. It is however clear that the creativity does not relate only to technological innovations but also to city organisation and management connected with social-business responsibility and all stakeholders' participation. These all make urban development projects planning and evaluation to be a challenge in the process of implementing the strategy via investment project management on the operational level. Figure 1 one illustrates the content of new paradigm on the strategic level.

Once the new paradigm of the investment decision making rationality in urban development on the strategic level has been formulated, we need to operationalise the strategy on the lower level of management (operational level).

4. The process of investment planning and evaluation (operational level)

Planning and decision-making are fundamental functions in the management process (Griffin, 2002). Planning is a process based on goals, facts and well-considered evaluation. It is a process of deciding what to do and how to do it before a decision is made. It means that planning encompasses defining goals, determining strategies of achieving them, and developing a cohesive hierarchy of plans designed to integrate and coordinate the activities (Robbins, DeCenzo, 2005). This is how planning contributes to decision-making - it consists of successive, logically structured activities, between which a cause-effect relation exists, and the final effect of which is an ultimate decision.

A general model of investment planning consists of several phases. Because investment project management is based on the assumption that the projects are of cyclical nature, these phases fit into a universal investment process model. This model was developed by United Nations Industrial Development (UNIDO) (Behrens, Hawranek, 1991) and includes three stages: pre-investment, investment and operational. Simultaneously, the European Union has developed its own concept of project life cycle (European Commission, 2005). Both approaches require input, criteria and output, as shown in the table 1.

Investment determinants (input) are classified in the literature as tangible and intangible, quantitative and qualitative, or hard and soft. According to urban development projects, the determinants can be social or cultural; legal or institutional; and political, economic, financial, urban or ecological (Wojewnik-Filipkowska, Rymarzak, 2013). The evaluation criteria (for ex-ante analysis) are the core of the selection stage. The criteria are dependent variables by

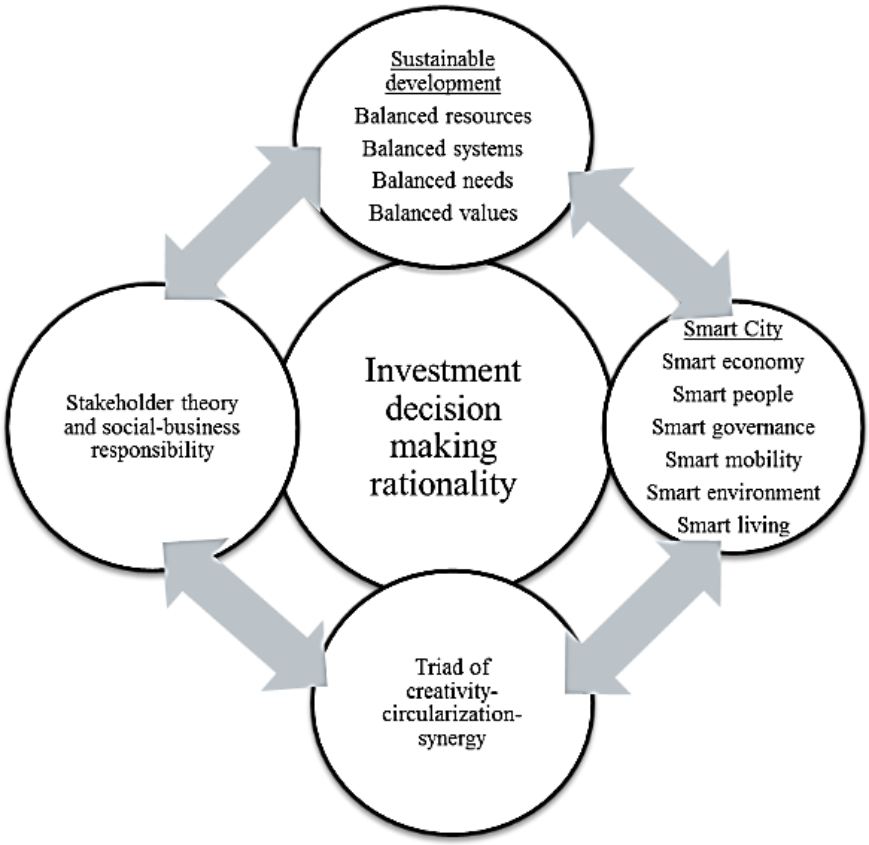

Figure 1. New paradigm of the investment decision making rationality in urban development – strategic level, source: Author's own work

Table 1. Framework of investment planning process, Author's own work

	Preparatory stage	**Selection stage**	**Control stage**
UNIDO model	1) Identification of the goals. 2) Analysis of resources & goal determinants. 3) Establishing criteria & preparing the resources. 4) Determining solution variants.	5) Application of decision-making criteria. 6) Assessment, comparing & selection. 7) Formulating the decision. 8) Carrying out the plan.	9) Control of results.
EU model	I. Programme. II. Identification. III. Formulation. IV. Commitment & appraisal.	V. Implementation.	VI. Evaluation.
Assumptions	*Input (determinants; e.g., resources)*	*Criteria (derived from aims and their measurements)*	*Output (products, services coherent with aims)*

which the output is judged (Węgrzyn, 2016). The *value added* is a criterion in most investment decision making (Boardman, Greenberhg, 2001; Sayce et all., 2006). From a broader perspective, added value should include external effects, such as the impact of the decision on the agent, synergies with other decisions, the creation of long-term development opportunities, and costs and benefits distribution among stakeholders. Then, output are products and services generated due to the investment programme and plan. Output must be coherent with the identified aims and measurements. Finally, urban development projects' results should be monitored and ex-post evaluated in order to improve process of investment management and stimulate development of new solutions derived from experience. For the purpose of evaluation, a set of understandable indicators communicated to all stakeholders is needed. These criteria should be included into multi-criteria evaluation in order to promote creativity, encourages stakeholders' involvement, and overcome traditional trade-offs (Girard, 2010). Ex-ante evaluation on the operational level of urban development, is *simply* to answer which project sustains the growth of urban

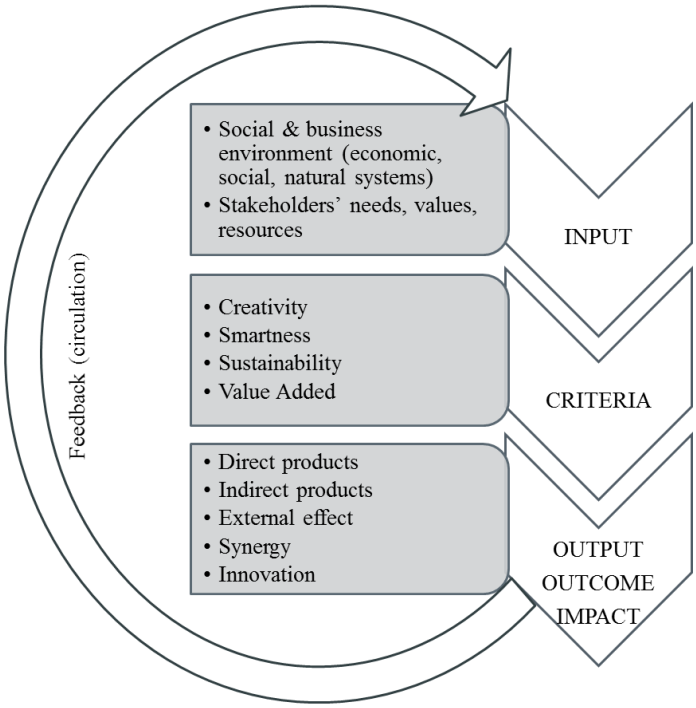

Figure 2. Framework of investment planning and evaluation in new paradigm – operational level, source: Author's own work

resilience against different threats (social, economic, ecological, etc.). But: *How can we compare benefits produced by buildings (...) with costs associated to negative changes in urban landscape? (...) Can economic evaluation of urban landscape balance the economic impact of its transformation?* (Girard, 2010, p. 307). The win-win composition of economic, ecological and social objectives requires evaluation which goes beyond economic and financial goals, and embraces both *hard* and *soft* values. Evaluation must then go beyond the output, but should anticipate, interpret and compare the quantitative and qualitative impact of the investment project and be a tool of coordinating choices of stakeholders on the basis of comparison between all costs and all benefits. The starting point of investment projects evaluation is then to precisely and comprehensively identify the stakeholders and net benefits considered in relation to economic, social and environmental criteria. According to P. Hardi and A. Martinuzzi (2007) sustainable development evaluation should also consider non-monetary and qualitative aspects, intervention and system reactions (here: outcome and impact), long-term risks, system dynamics. They argued that evaluation is a mutual learning process (here: feedback/circulation) and sustainable development evaluation constitute a basic factor for innovations. Finally, the authors claimed stakeholders' involvement in the evaluation (here: stakeholders' needs, values, resources).

The proposed conceptual strategic approach to the investment decision making rationality in urban development, can be operationalized through investment projects being planned and evaluated. Figure 2 illustrates the framework of investment planning and evaluation in new paradigm.

5. Summary

Despite the fact that city management can utilise the expertise of business studies, especially in terms of investment projects, cities cannot be run as a pure business. Local governments and enterprises operate in the same environment, with the same strategic aim – to increase competitiveness by development and creation of value added, but the understanding of these issues is different. Still, the understandable differences between the sectors cannot be an argument for the resignation of a systematic approach to evaluation of results of allocated resources. It is about adapting methods, concepts which are commonly used in the private sector. A sign of the achievements of business management in public sector is *New Public Management.* However, NPM subordinates the actions of the administration to the needs of the users of its services, and therefore may weaken the accountability to citizens. In the conditions of limited resources, NPM may result in a reduction of functions to those which are used the most often. Finally, the idea of maximum use of market mechanisms may lead to inconsistency with social and *soft* values – those which the market can hardly price in a true way. Therefore, public sector investment management should be based not only on outcome as assumed in NPM, but should also consider the process. Moving beyond NPM is then required. New Public Service (NPS) (Denhardt, Denhardt, 2011) is also an example of emerging approach, however it concen-

trates more on the general management than investment management.

A new approach to management of city investments, as developed and proposed in this research, is needed. It has been be established including the principles of sustainable smart development, triad *of creativity – circularisation – synergy*, stakeholder theory, and the idea of social-business responsibility. The approach primarily elevates the concept of the *public governance* which is characterised by a decentralisation, participation, constructivist and a win-win approach. These attributes increasingly refer to the decision-making process and subsequent implementation. Concerning decision making process relating investment, multi-criteria methods are recommended, as quantitative CBA is unable to encompass non-monetary values. The multi-criteria methods derive from logic and mathematics, and take into consideration diverse values and perspective of diverse actors as well. This means that the problem is not the absence of methods (Górecka, 2010), but the choice of a proper understandable method and building a hierarchy embracing the main goal and criteria (or sub criteria), and possible options.

The presented paradigm of principles of investment decision making rationality in urban development is also driven by the fact, that the investment in urban development are of *cross* nature – both business and public like. The typical investment classification which identifies public and private investment is not more sufficient. There may be social investments with commercial aspects and commercial investment with social aspects, and therefore the problem regarding planning and evaluation arises. Subsequently, it requires social-business responsibility and multi-criteria analysis, as explained above.

In the course of the literature analysis it was also found out that the traditional infrastructure investment classification of economic (technical) and social infrastructure is not sufficient and does not reflects reality. Several facts and observations: the interpenetration of public and business sector in terms of knowledge and investment, public sector's role of value protector (guarantor), and context of sustainability in terms of different infrastructure types, are reasons to identify group of investment relating infrastructure of business environment. That type of infrastructure is important also in terms of smart development.

The research fills the gap in existing theory relating investment decisions in urban development. The proposed approach proves its value added as it organizes a number of relevant content however it is just a proposition in the discussion relating to improvement of comprehensive strategic and operational approach to creating local investment development. The novelty of the approach relies more on a new application of current state-of-art than on inventing new ideas from the scratch as the general idea behind this research was to bring different concepts together to make a breakthrough in urban investment development methodology and implementation in order to support cities on strategic and operational level.

References

1. ALFORD J., 2001, The implications of 'publicness' for strategic management theory, in: *Exploring Public Sector Strategy*, eds. Johnson G., Scholes K., Prentice Hall-Pearson Education, London, p. 1-16.
2. ANDRISANI P. J., HAKIM S., SAVAS E. S., 2002, *The New Public Management, Lessons from Innovating Governors and Mayors*, Kluwer Academic Publishers, Norwell.
3. APPLEBY P. H., 1949, *Policy and Administration*, University of Alabama Press, Chicago.
4. ATKINSON A. B., STIGLITZ J. E., 1980, *Lectures in Public Economics*, McGraw-Hill Book Co, Ltd., New York.
5. BARON M., 2012, Do We Need Smart Cities for Resilience, in: J*ournal of Economics & Management*, vol. 10, p. 32-46.
6. BEHRENS W., HAWRANEK P. M., 1991, *Manual for the preparation of industrial feasibility studies*, United Nations Industrial Development Organisation (UNIDO), Vienna.
7. BLOESCH J., von HAUFF M., MAINZER K., MOHAN S. V., RENN O., RISSE V., SONG Y., TAKEUCHI K., WILDERER P. A., 2015, Sustainable Development integrated in the Concept of Resilience, in: *Problemy Ekorozwoju/ Problems of Sustainable Development*, vol. 10, no 1, p. 7-14.
8. BOARDMAN A. E., GREENBERHG D. H., 2001, *Cost-Benefit Analysis. Concepts and Practice*, Prentice Hall, New Jersey.
9. BOUCKAERT G., 1993, Measurement and Meaningful Management, in: *Public Productivity & Management Review*, vol. 17, no 1, p. 31-43.
10. BOX R. C., MARSHALL G. S., REED B. J., REED C. M., 2001, New Public Management and Substantive Democracy, in: *Public Administration Review*, vol. 61, p. 608-619.
11. BRYSON J. M., CROSBY B. C., BLOOMBERG L., 2014, Public Value Governance: Moving Beyond Traditional Public Administration and the New Public Management, in: *Public Administration Review*, vol. 74, p. 445-456.
12. BOLAND T., FOWLER A., 2000, A systems perspective of performance management in public sector organisation, in: *The International Journal of Public Sector Management*, vol. 13, no 5, p. 417-446.
13. CHAN Y.-C. L, 1999, Performance measurement and adoption of balanced scorecard: A survey of municipal governments in the USA and

Canada, in: *The International Journal of Public Sector Management*, vol. 17, no 3, p. 204-221.
14. Commission of the European Communities, 2001, *Green Paper, Promoting a European Framework for Corporate Social Responsibility*, European Commission, Brussels.
15. DENHARDT J.V., DENHARDT R.B., 2011, *The New Public Service: Serving, Not Steering*, M. E. Sharpe, Armonk, New York.
16. DIXON M. J., 2012, *How Smart Cities Save Money (and the Planet)*, Harvard Business Review, HBR Blog Network, 29 Oct, https://hbr.org/2012/10/tech-savvy-cities-are-saving-m (20.09.2015).
17. DRUCKER P. F., 1973, Managing the Public Service Institution, The Public Interest, in: *College and Research Libraries*, vol. 37, no 1, p. 4-14.
18. European Commission, 2005, *Partnership Development Toolkit, A partnership oriented planning, monitoring and evaluation guide for facilitators of EQUAL Development and Transnational Partnerships*, Belgium http://ec.europa.eu/employment_social/equal_consolidated/data/document/pdtoolkit_en.pdf (10.09.2015).
19. EUROSTAT, 2015, *Sustainable development in the European Union, 2015 monitoring report of the EU Sustainable Development Strategy*, http://ec.europa.eu/eurostat/documents/3217494/6975281/KS-GT-15-001-EN-N.pdf (20.09.2015).
20. FISHER T., 2014, Public Value and the Integrative Mind: How Multiple Sectors Can Collaborate in City Building, in: *Public Administration Review*, vol. 74, p. 457-464.
21. FLINT J., RACO M., Introduction: Characterising the 'new' politics of sustainability: from managing growth to coping with crisis, in: *The Future of Sustainable Cities*: *Critical Reflections*, eds. Flint J., Raco M., University Press Scholarship, Southampton, 2012, p. 3-28.
22. FONTAINE C., HAARMAN A., SCHMID S., 2006, *The Stakeholder Theory*, Edlays.
23. FREEMAN R. E., 1984, *Strategic Management: a Stakeholder Approach*, Basic Books, Cambridge University Press, New York.
24. GEDDES P., 1915, *Cities in evolution: an introduction to the town planning movement and to the study of civics*, Williams & Norgate, London 1915.
25. GIFFINGER R., FERTNER C., KRAMAR H., KALASEK R., PICHLER-MILANOVIC N., 2007, MEIJERS E., *Smart Cities – Ranking of European Medium-Sized Cities*, Research Report, Vienna University of Technology, Vienna.
26. GIRARD L. F., 2011, Multidimensional Evaluation Processes to Manage Creative, Resilient and Sustainable City, in: *Aestimum*, vol. 59, p. 123-139.
27. GIRARD L. F., 2013, Toward a smart sustainable development of port cities/areas: the role of the 'historic urban landscape approach', in: *Sustainability*, vol. 5, no 10, p. 4329-4348.
28. GIRARD L. F., 2010, Creative Evaluations for a Human Sustainable Planning, in: *Making Strategies in Spatial Planning*, CERRETA M., CONCILIO G., MONNO V. (eds.), 2010, Springer, Dordrecht, Heidelberg, London, New York, p. 305-328.
29. GIRARD L. F., NIJKAMP P., 1997, *Le Valutazioni Integrate per lo Sviluppo Sostenibile della Città e del Territorio*, FrancoAngeli, Milano.
30. GÓRECKA D., 2010, On the choice of method in multi-criteria decision aiding process concerning European projects, in: *Multiple Criteria Decision Making '10-11*, eds. Trzaskalik T., Wachowicz T., University of Economics in Katowice, Katowice, p. 81-103.
31. GRIFFIN R. W., 2002, *Fundamentals of Management*, A&M University, Texas.
32. HALACHMI A., 1996, Business process reengineering in the public sector: Trying to get another frog to fly? In: *National Productivity Review*, vol. 15, no 3, p. 9-18.
33. HARDI P., MERTINUZZI A., 2007, Series editors' preface: Evaluating Sustainable Development – topics, trends and target groups of this new book series, in: *Sustainable Development in Europe. Concepts, Evaluation and Applications*, eds. Schubert U., Störmer E., Elgar E., Cheltenham, p. XVII-XXIV.
34. HIRIGOYEN G., LAOUER R., 2013, Convergence of Corporate and Public Governance: Insights From Board Process View, in: *SAGE Open*, April-June, p. 1-8.
35. HM Treasury, 2012, *A new approach to public private partnerships*, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/205112/pf2_infrastructure_new_approach_to_public_private_parnerships_051212.pdf (2016.04.10).
36. HOLLANDS R., 2008, Will the Real Smart City Stand Up? Creative, Progressive, or Just Entrepreneurial? In: *City*, vol. 12, no 3, p. 302-320.
37. HOOD C., 1991, A public management for all seasons? In: *Public Administration*, vol. 69, p. 3-19.
38. ITU (International Telecommunication Union), 2014, *Smart sustainable cities: An analysis of definitions*, *Focus Group Technical Report*, http://www.itu.int/en/ITU-T/focusgroups/ssc/Documents/Approved_Deliverables/TR-Overview-SSC.docx (20.09.2015)
39. JONES P. S., 2003, Urban Regeneration's Poisoned Chalice: Is There an Impasse in (Community) Participation-based Policy? In: *Urban Studies*, vol. 40, no 3, p. 581-601.
40. KAGANOVA O. , 2011, *Guidebook on Capital Investment Planning for Local Governments*, The World Bank, http://siteresources.worldbank.org/INTURBANDEVELOPMENT/Resource

s/336387-1169585750379/UDS13CIP.pdf (10.09.2015).
41. KALAMBOKIDIS L., 2014, Creating Public Value with Tax and Spending Policies: The View from Public Economics, in: *Public Administration Review*, vol. 74, p. 519-526.
42. LEŹNICKI M., LEWANDOWSKA A., 2016, Contemporary Concepts of a City in the Context of Sustainable Development: Perspective of Humanities and Natural Sciences, *Problemy Ekorozwoju/ Problems of Sustainable Development*, vol. 11, no 2, 45-54.
43. LOMBARDI P., GIORDANO S., CARAGLUI A., DEL BO C., DEAKIN M. , NJIKAMP P., KOURTIT K. , 2011, *An advanced triple helix network model for smart city performance, Research Memorandum*, University of Amsterdam vol. 45, http://degree.ubvu.vu.nl/repec/vua/wpaper/pdf/20110045.pdf (20.09.2015).
44. LYONS M., SMUTS C., STEPHENS A., 2001, Participation, Empowerment and Sustainability: (How) Do the Links Work? In: *Urban Studies*, vol. 38, no 8, p. 1233– 1251.
45. MINISTRY of Economy, 2012, *Poland 2012 Report Economy*, Warsaw, https://www.mr.gov.pl/media/15367/Poland_2012_Report_economy_eng.pdf (10.09.2015).
46. MITCHELL R. K., AGLE B. R., WOOD D. J., 1997, Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts, in: *The Academy of Management Review*, vol. 22, no 4, p. 853-886.
47. NIJAKI L. K, WORREL G., 2012, Procurement for sustainable local economic development, in: *International Journal of Public Sector Management*, vol. 25, no 2, p. 133-153.
48. OSBORNE S. P., 2010, *The New Public Governance? Emerging Perspectives on the Theory and Practice of Public Governance*, Routledge, New York.
49. PAWŁOWSKI A., 2008, How many dimensions does sustainable development have?, in: *Sustainable Development*, vol. 16, no 2, p. 81-92.
50. PHELPS A., 2010, Rationale, practice and outcomes in municipal property asset management, in: *Journal of Corporate Real Estate*, vol. 12, no 3, p. 157-174.
51. POISTERT H., STREIB G. D., 1999, Strategic Management in the Public Sector: Concepts, Models, and Processes, in: *Public Productivity and Management Review*, vol. 22, no 3, p. 308-325.
52. RADNOR Z., OSBORNE S. P., 2013, Lean: A failed theory for public services?, in: *Public Management Review*, vol. 15, no 2, p. 265-287.
53. RAVETZ J., 2011, Urban Synergy-Foresight, Urban Governance in the EU, in: *Current Challenges and Future Prospects*, EU, p. 31-44.
54. ROBBINS S. P., DECENZO D. A., 2005, *Fundamentals of Management*, Pearson Education, New Delhi.
55. SAYCE S., SMITH J., COOPER R., VENMORE-ROWLAND P., 2006, *Real Estate Appraisal: From Value to Worth*, Blackwell Publishing Ltd., Oxford.
56. SIENKIEWICZ M. W., 2013, Determinants and effects on strategic management in the local government in Poland and western Europe, in: *Proceedings: NISPAcee Annual Conference Regionalization and Inter-regional Cooperation*, Belgrade, Serbia, May 16-18, p. 1-16.
57. SIMMIE J., MARTIN R., 2010, The Economic Resilience of Regions: Towards an Evolutionary Approach, in: *Cambridge Journal of Regions, Economy and Society*, vol. 3, p. 27-3.
58. SIMONE H. A., 1946, The Proverbs of Administration, in: *Public Administration Review*, vol. 6, no 1, p. 53-67.
59. STAMP J. C., 1923, The Contrast Between the Administration of Business and Public Affairs, in: *Public Administration*, vol. 1, p. 158-171.
60. STOKER G., 2006, Public Value Management: A New Narrative for Networked Governance?, in: *American Review of Public Administration*, vol. 36, no 1, p. 41–57.
61. UNITED NATIONS, Department of Economic and Social Affairs, Population Division, 2014(a), *World Urbanization Prospects: The 2014 Revision, Highlights*, New York.
62. UNITED NATIONS, General Assembly, 2014 (b), *Open Working Group of the General Assembly on Sustainable Development Goals, Open Working Group proposal for Sustainable Development Goals*, A/68/970, http://www.un.org/ga/search/view_doc.asp?symbol=A/68/970&Lang=E (20.09.2015).
63. WCED (Brundtland Commission), 1987, Our Common Future, Oxford University Press, Oxford.
64. WĘGRZYN J., 2016, The Perception of Critical Success Factors for PPP Projects in Different Stakeholder Groups, in: *Entrepreneurial Business and Economics Review*, vol. 4, no 2, p. 81-92.
65. WHITE A. D., 2011, A review of UK public sector real estate asset management, in: *Journal of Corporate Real Estate*, vol. 13, no 1, p. 6-15.
66. WOJEWNIK-FILIPKOWSKA A., 2012, Investments in the process of urban regeneration – concept of investment economic evaluation, in: J*ournal of the Polish Real Estate Scientific Society*, vol. 20, no 3, p. 247-259.
67. WOJEWNIK-FILIPKOWSKA A., RYMARZAK K M., 2013, Decision-making in corporate and municipal asset management – literature review, in: *International Journal of Real Estate Studies*, vol. 8, no 1, p. 16-29.

68. WOJEWNIK-FILIPKOWSKA A., RYMARZAK M., LAUSBERG C., 2015, Current Managerial Topics in Public Real Estate Asset Management, in: *World of Real Estate*, vol. 4, no 94, p. 5-10.
69. YANG K., 2007, Making performance measurement relevant? Administrators' attitudes and structural orientations, in: *Public Administration Quarterly*, vol. 31, no 3, p. 342-383.
70. ZEEMERING E., 2009, What does sustainability mean to city officials?, in: *Urban Affairs Review*, vol. 45, p. 247-73.
71. ZELENY M., 2010, Knowledge Management and Strategic Self-Sustainability: A Human Systems Perspective, in: eds. Cerreta M., Concilio G., Monno V., *Making Strategies in Spatial Planning*, Springer Dordrecht Heidelberg London New York, p. 257-280.