



Institute of Economic Research Working Papers

No. 51/2014

**Research Trends of Public-Private Partnerships
(PPPs) in Poland**

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The paper submitted to

**VIIIth INTERNATIONAL CONFERENCE ON APPLIED
ECONOMICS
CONTEMPORARY ISSUES IN ECONOMY
under the title
MARKET OR GOVERNMENT?**

Institute of Economic Research and Polish Economic Society Branch
in Toruń

18-19 June 18-19, 2015, Toruń, Poland

Toruń, Poland 2014

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Research Trends of Public-Private Partnerships (PPPs) in Poland

JEL Classification: A10

Keywords: *public private-partnership (PPP), systematic review, research methods*

Abstract: Over the last two decades the attention given to the research on Public-private partnerships (PPPs) has been steadily increasing. A literature surveys on the research trends of PPP in English language publications suggest some emerging trends in the topics dedicated to the PPP.

A similar compilation of PPP literature is not readily available on the ground on scientific research in Poland. That is why the aim of the article is to present contemporary trends that are being developed in Poland in PPP filed. Indication of possible further research in the area of PPP is also an essential issue tackled in this article.

Introduction

During the last two decades PPP has been adopted more extensively by governments around the globe. One of the most visible form of recent partnership has been the long-term infrastructure contract partnership. This kind of contract is organized around a design, finance, build, own, operate, transfer model and involves private sector financing and private sector project management capabilities.

A parallel phenomenon to the process of PPP implementation is the increasing number of publications devoted to the issues of public and private sector cooperation. In recent years many scholars has given special attention to this phenomenon (Al-Sharif and Kaka, 2004), (Ke at al., 2009), (Tang et al., 2010), (Garvin and Gross, 2012). Conducted so far PPP

literature reviews have provided thorough and valuable contributions by cataloging the PPP-related articles and also by sorting these papers into thematic categories. This systematic literature review is especially useful to identify the research trends of PPP topic.

In Poland, the implementation of PPP projects began as late as 2009. Therefore, there is an evident lack of scientific publications based on a thorough analysis of the ongoing process of implementing PPP models to Polish conditions. That is why, to make Polish literature more accessible and to facilitate synthesizing PPP on the national ground, similar research was conducted on the basis of publications issued in Poland. The 172 articles were identified, categorized by theme, and analyzed by citations.

This paper will begin by discussing the evidence-based approach in PPP study through the effective use of systematic reviews. The following sections will compare and contrast the nature of publications devoted to the PPP issues. Finally this paper will present the challenges in conducting further research undertaking PPP topics.

Research trends of PPPs

Three of four presented PPP literature reviews, summarized in Table 1, cataloged the PPP-related articles published in civil engineering, construction and project management journals. At the very beginning the authors concentrated on topics concerned to management issues, such as risk, financing, procurement. Garvin and Bosso (2012) expanded this effort by examining PPP in broader context. Instead of rankings articles in a chosen journals, they focused university-published journals, journals with high impact factors and well-known works in the field and articles from university publications. However, in an effort to limit the study scope to a reasonable size, their investigation focused only on highway-related themes (see tab. 1). Similar to prior works, several themes were also established to help characterize the literature found. In contrast to previous studies Garvin and Bosso (2012) have taken into account also themes going beyond the area of management sciences, e.g. general topics, public sector issue, national applications.

Table 1. Summary of Recent PPP Literature Reviews

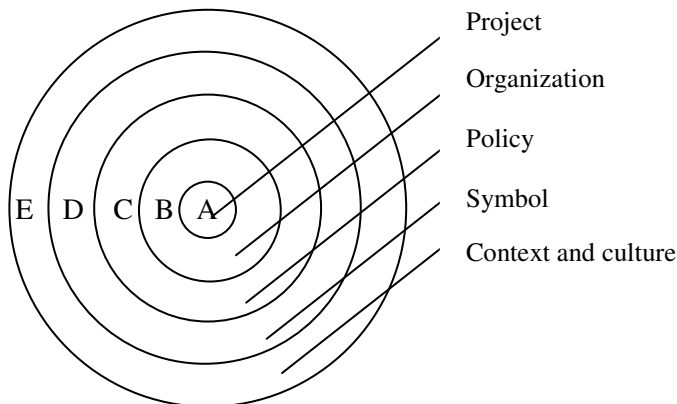
	Al-Sharif and Kaka (2004)	Ke et al. (2009)	Tang et al. (2010)	Garvin and Gross (2012)
No. papers	34	170	107	287
Time span	1998-2003	1998-2008	1998-2007	1997-2010
Research area	construction engineering and management	construction engineering and management	construction engineering and management	transportation projects
Categories	Procurement Risk management Financial management	Procurement Risk management Financial package Economic viability Investment environment Governance issues Integration research	Concession periods Risks Financing Relationships Project success factors	General concepts Governance issues Procurement Contract design Risk Finance Public sector issues National applications

Source: Source: Own study based on Garvin and Gross (2012).

The identified articles were also categorized into research method. Central to the conducted categorization was assessment of data collection techniques. According to this criterion three groups of articles were identified: qualitative, quantitative and reviews. In particular, qualitative methods tended to adopt: individual interviews, focus groups or group interviews, observation, document or textual analysis, and/or visual data analysis. Quantitative methods tended to utilize models or experimental data. Articles where specific data collection methods were not employed tended toward reviews of existing theories, policies or practices.

Described outcomes of presented literature review suggests that there is a number of understandings of what a partnership is. This is one of the reasons that led Hodge (2010) to introduced his conceptual model in which he persuades that PPPs may by analyzed at many different levels. Author formulated it in this way: PPPs can be understood as (1) a specific project or activity, (2) a management tool or organizational form, (3) a policy, or statement as to the role of the government in the economy, (4) a governance tool or symbol or (5) an historical context and a cultural set of assumptions. According to Hodge we might view PPPs to provide infrastructure through as series of lenses, from a narrow lens at one extreme to the broadest lens at the other, as shown in Figure 1.

Figure 1. Dimensions to the Public-Private Partnership phenomenon



Source: Hodge and Greve (2011).

This research adopts the classification criteria proposed by Hodge (2010). To make the literature analysis more productive we may apply two more dimensions to this conception.

The five circles of understanding PPPs could be examined from three research perspectives: economics, finance and management science. Additionally, according to Garvin and Bosso (2012) the identified articles can be categorized into following research methods: empirical (qualitative or quantitative) and non-empirical (reviews).

Aforementioned criteria of examining PPPs literature seems to constitute the frames that makes it possible to present a complete picture of knowledge on PPP issues in Poland.

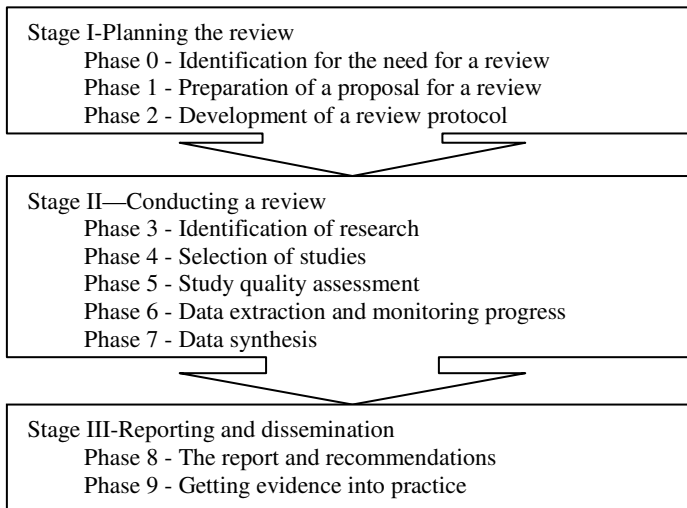
The idea of systematic literature review

Generally, the aim of conducting a literature review is to enable the researcher both to map and to assess the existing intellectual territory, and to specify a research question to develop the existing body of knowledge further (see Tranfield et al., 2003). A literature review may take a traditional or systematic form. In its traditional shape literature review is based on a critical analysis of monographs and articles in a chosen research area. This kind of analysis is often accompanied by the discussion on research subjects that was undertaken by other authors. One of the limitations of the traditional literature review is the fact that it accepts uncompleted representation literature relevant to the analyzed topic exposing the research to the accusation of incompleteness. (see Czakon, 2011). That is why, in a response to the demand for performing the literature studies in a reliable, transparent and reproducible manner as possible, methodology of a systematic literature review was developed. Systematic literature review can be described as a quantitative analysis implemented according to specific stages of purposeful literature selection (Czakon, 2011). In other words systematic reviews differ from traditional narrative reviews by adopting a detailed technology, that aims to minimize bias through exhaustive literature searches of published and unpublished studies and by providing an audit trail of the reviewers decisions, procedures and conclusions (see Tranfield et al., 2003). Additionally systematic review of literature could be characterized by the utilization of digital databases and electronic versions of publications.

Methodology of the research

The process of systematic review was divided on three stages: planning the review, conducting the review and reporting (fig 1).

Figure 2. Dimensions to the Public-Private Partnership phenomenon



Source: Tranfield et al. (2003)

The first stage starts with the establishing the purpose of the research. The main purpose of the study was to identify scientific research conducted in Poland in the area of PPP and make it more accessible. An important part of the study was both to compare obtained results with the results of similar studies on international PPP research trends as well as to identify the research gaps in a given topic.

The second stage includes identifying relevant articles and creating database representing a summary of the PPP literature in Poland. To identify PPP literature across a variety of disciplines BAZEKON (a full-text databases with integrated search capabilities) was chosen. The primary set of literature was created by applying key words as a search tool. A unified set of keywords is assigned to the BAZEKON base. Among all the possible terms following keywords were selected:

- public-private partnership (PPP),
- public projects,
- infrastructure financing,

- concessions,
- project finance,
- investment projects,
- private finance initiative,
- value for money,
- privatization of municipal enterprises,
- public sector.

Adopted searching criteria were met by 230 articles that have been published over the years 2002-2013. The aim of the next phase was to limit the initial number of articles by applying exclusion criteria. As a result following articles were omitted:

- published in studies that have only ISBN number (monographs or chapters in monographs),
- published in periodicals that were not included on the list of scientific journals (According to the Minister of Science and Higher Education Statement on the list of scientific journals),
- concerning only legal issues,
- weakly associated with the PPP subject (The list of 172 also includes articles in which PPP subject was important part of the research although wasn't situated at the core of the research thread).

Applied approach resulted in limiting the number of articles to 172. Full text was available online for 68 publications. However examining only articles that are available online would, in practice, result in narrowing the study to 2010-2013 years. That is why, to widen the time span of the analysis, data relating to the remaining 105 articles were obtained in a traditional way.

Implementing the following criteria allowed to prepare a strict, reliable and reproducible database for the further processing.

Prior to the bibliometric analysis the articles were categorized by the (1) way of explaining the idea of PPP, (2) research field and (3) methodology. Although some papers could reasonably be assigned to multiple categories among the following sub-groups, in each case a single classification regarded as most descriptive was chosen.

Results

The number of articles on PPP topic grew rapidly starting in 2003. After some fluctuations over the 2004-2009, publications in this topic once again surged significantly in 2010. This increased interest in PPP issues was

related to the implementation new regulation acts in PPP in Poland that took place on the beginning of 2009. This phenomenon is explored subsequently.

To explore the trends by the way of explaining the idea of PPP, the chronological distribution of papers within all five groups was considered graphically (Figure 3).

Figure 3. Distribution of Articles considering the way o understanding PPP by Year

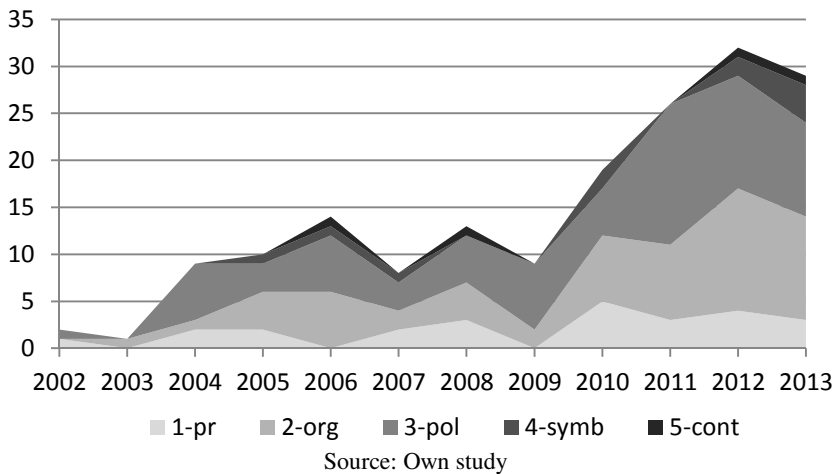
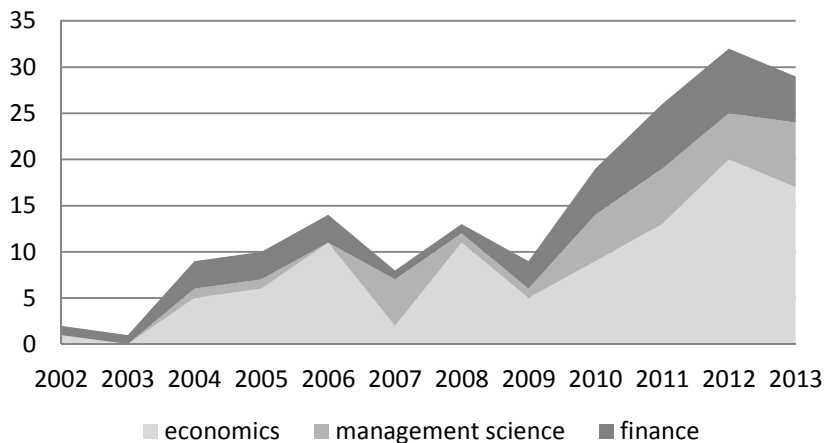


Figure 3 suggests that in Poland PPP is mostly interpreted either as a specific organizational form of providing infrastructure services or as a policy tool. Since 2010, a slight increase of publications examining PPP from a project perspective was noticed. This conclusion could be supported by the findings from analysis the data enclosed on figure 4.

Figure 4. Distribution of Articles considering the research field by Year

Source: Own study

Presentation of the set of articles in a matrix form arouses some more specific and interesting finding (table 2).

Table 2. Summary of thematic distribution of articles

	Project	Organization	Policy	Symbol	Context and culture	Total
Economics	3	34	53	5	3	98
Management science	13	12	3	6	0	34
Finance	8	15	17	0	0	40
Total	24	61	73	11	3	172

Source: Own study

Policy (73) and organization (61) are most popular levels of PPPs analysis and this way of PPPs understanding is dominated by economic perspective. At policy level perspective PPP topics was investigated most commonly in the context of economic growth, regional development and the role of the state in the economy. In this context PPP is predominately perceived as a tool to achieve government goals and discussion on workable legal and regulatory framework dominates. At organization level PPP is perceived e.g. as a form of providing public services in municipalities. To this circle of PPP understanding was also assigned studies on PPP market analysis in Poland and other countries.

This two ways of PPPs understanding also dominates if we consider finance perspective. Subject of discussion in finance-relating research was concentrated around such aspects as EU policy in PPP area and its impact on the public debt.

Subsequently PPP can be interpreted as a project. From this point of view PPPs most frequently could be analyzed in management context. However important part of the analysis on this level is finance perspective (e.g. capital structure, rules and techniques of project finance).

Small part of articles in the studied set has taken studies on PPP at the level that represents the symbol of governance (11). From that perspective studies that were focused on efficiency threads were classified into economics while studies related to organizational aspects were attributed to management perspective.

The most extensive background for the analysis of the PPP is an institutional perspective. From this perspective PPP can be the subject of analysis in a historical context and a cultural set of assumptions. However the sample of articles that could be categorized to this research area is limited.

If we consider applied methodology, 157 of the 172 articles were categorized as non-empirical reviews of existing literature, concepts, or practices. Into this group was also assigned articles that included elements of empirical data analysis, but without clearly indicated methodology of collecting and compiling the data.

Of the remainder, 5 were qualitative while 10 employed quantitative methods (interviews, case studies).

Greatest diversity of applied methods was in the management area. If we take into account the levels of PPP interpretation we could find that diversity reached highest rates on project and organization levels.

Citations analysis also indicates that there is a low negative correlation (-0,24) between citations number and publication year. Interestingly, there was reported lack of relation between citations and on-line access to electronic version of an article.

Further analysis of the most frequently cited articles and its source of publication proves that most popular articles were published in "Samorząd Terytorialny" (see table 3).

Table3. Top Journal with PPP articles by number of citations and number of articles

No	Journal	Citations*	No of articles
1	Samorząd Terytorialny	27	5
2	Studia Regionalne i Lokalne	13	3
3	Studia i Prace Kolegium Zarządzania i Finansów / Szkoła Główna Handlowa	6	4
4	Bank i Kredyt	4	2
5	Zeszyty Naukowe Uniwersytetu Szczecińskiego. Finanse. Rynki finansowe. Ubezpieczenia.	3	12
6	Acta Universitatis Lodziensis. Folia Oeconomica.	2	13
7	Ekonomika i Organizacja Przedsiębiorstwa	2	3
8	Przegląd Komunikacyjny	2	2
9	Studia Ekonomiczne / Uniwersytet Ekonomiczny w Katowicach	2	13
10	Acta Scientiarum Polonorum. Oeconomia	2	14
11	Prace Naukowe Akademii Ekonomicznej we Wrocławiu / Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu	0	32
12	Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług	0	11

*Citations on the base of BAZEKON and GoogleScholar, date: 05.12.2014.

Source: Own study

To sum up, it seems that in Poland PPP literature has been dominated by economic perspective and PPP is most the subject of analysis on public policy level.

However PPP-related research in management and finance disciplines are also valuable for understanding the complexity of PPP.

Conclusions

This paper has outlined the opportunities and challenges in applying ideas and methods of systematic literature review developed in PPP field into national ground. The aim of systematic review was to provide collective insights through theoretical synthesis into PPP fields and sub-fields in Poland.

Nevertheless, systematic review isn't free of some limitations. This methodology has limited application for the analysis of monographic publications. Systematic literature review considers only publications indexed in the database and has high sensitivity to the wrong choice of keywords.

Despite its limitations, for academics, the systematic reviewing process increases methodological rigour whereas for practitioners systematic review helps develop a reliable knowledge base by accumulating knowledge from a range of studies (see Tranfield et al., 2003, p. 220).

In this sense, systematic review can be regarded as a practical tool which aims to serve both academic and practitioner communities.

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