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

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Abstract: *Over the last two decades the attention given to the research on Public-private partnerships (PPPs) has been steadily increasing. 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 grounds of national scientific research. That is why the aim of the article is to present contemporary trends that are being developed in Poland in the PPP filed. The indication of possible further research in the area of PPP is also an essential issue tackled in this article.

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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 have given special attention to this phenomenon (Al-Sharif & Kaka, 2004; Ke, *at al.*, 2009; Tang, *et al.*, 2010; Garvin & Gross, 2012). PPP literature reviews conducted so far 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 in 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, in order to make the 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. 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

It could be assumed that at the very beginning PPP themes started to be perceived as a separate subject of the analysis in the area of project management. The authors concentrated on the topics concerning management issues, such as risk, financing, procurement. That is why three out of four presented PPP literature reviews (summarized in Table 1) cataloged the PPP-related articles published in civil engineering, construction and project management journals. Garvin and Bosso (2012) expanded this effort by examining PPP in a broader context. Instead of rankings articles in chosen

journals, they focused on 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 categories were also established to help in analysing the findings from literature survey. However, in contrast to the previous studies, Garvin and Bosso (2012) have also taken into account 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

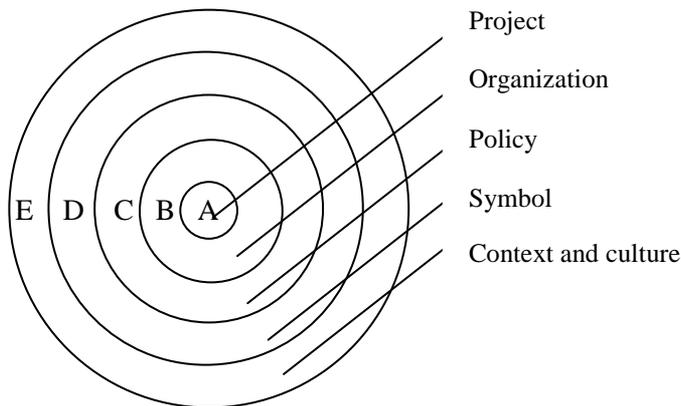
Source: Source: Own study based on Garvin and Gross (2012).

The identified articles were also categorized by research method. Central to the conducted categorization was the 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. Arti-

cles where specific data collection methods were not employed tended toward reviews of existing theories, policies or practices.

Described outcomes of presented literature reviews suggests that there is a number of understandings of what a partnership is. This is one of the reasons that led Hodge (2010) to introduce his conceptual model in which he persuades that PPPs may be analyzed at many different levels. The Author formulated it in the following 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 through 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).

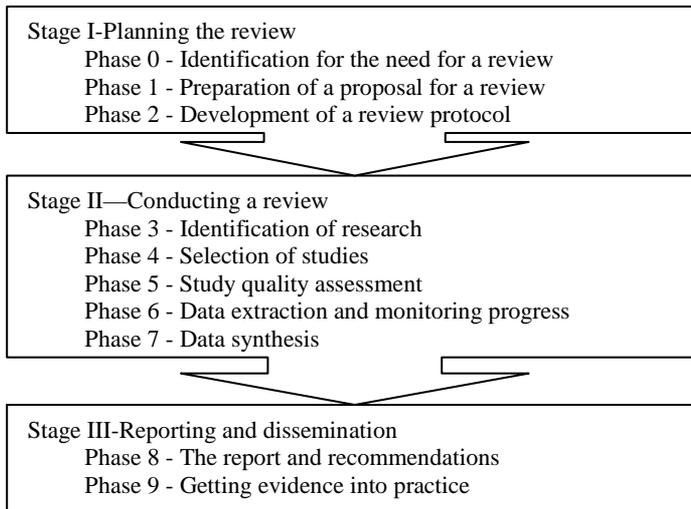
The aforementioned criteria of examining PPPs literature seem to constitute the frames that make it possible to present a complete picture of knowledge on PPP issues in Poland.

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, a 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 a discussion on research subjects that were undertaken by other authors. One of the limitations of the traditional literature review is the fact that it accepts uncompleted literature representation relevant to the analyzed topic exposing the research to the accusation of incompleteness. (see Czakon, 2011). That is why, in response to the demand for performing the literature studies in an as reliable, transparent and reproducible manner as possible, the 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, which 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 literature review 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 into 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 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 the 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 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, the following subset of keywords was 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, the following articles were omitted:

- published in studies with ISBN number only (monographs or chapters in monographs),
- published in periodicals that were not included in 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 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).

The 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 time span of the study to years 2010-2013. That is why, in order to make the analysis wider, the data related 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 further processing.

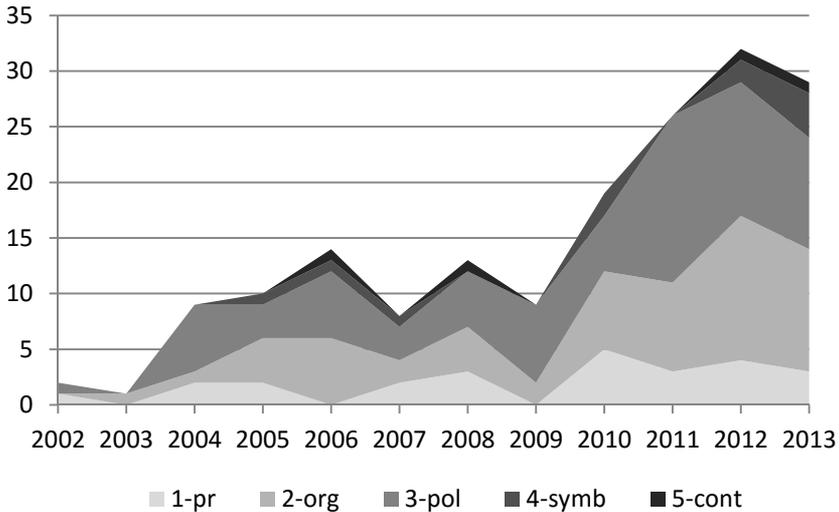
Prior to the bibliometric analysis, the articles were categorized by the (1) way of explaining the idea of PPP, (2) research field and (3) methodology. Although some papers could reasonably be assigned to multiple categories among the following sub-groups, in each case a single classification regarded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

Results

The number of articles on PPP topic grew rapidly starting in 2003. After some fluctuations over the 2004–2009, PPP publications once again surged significantly in 2010. The increased interest in PPP issues could be assigned to the implementation of new PPP regulation acts in Poland that took place in the beginning of 2009. Since that time the phenomenon has been explored steadily.

To investigate the occurring trends in the field of understanding the idea of PPP, the chronological distribution of papers within all five groups was analyzed graphically (Figure 3).

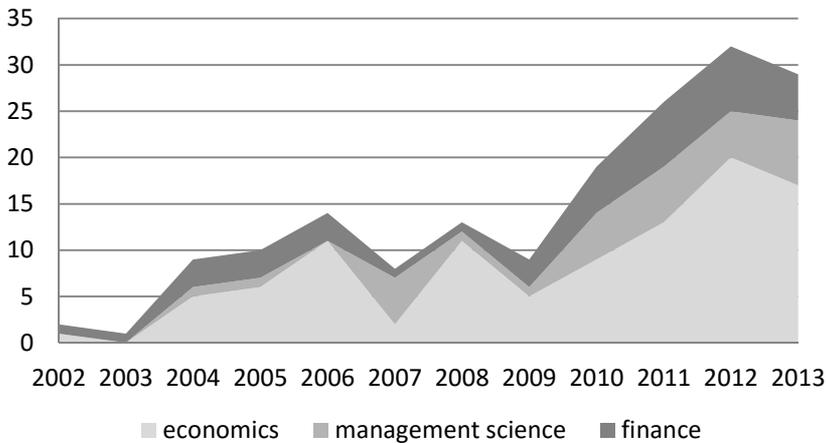
Figure 3. Distribution of Articles considering the way of understanding PPP by Year



Source: Own calculations

Figure 3 suggests that during the analyzed period, PPP has been predominately 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 of data enclosed on Figure 4 and in Table 2.

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



Source: Own calculations.

The compilation of articles set in an 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 calculations.

As it was aforementioned, policy (73) and organization (61) were most popular topics in the PPP area. What is more, this ways of PPPs understanding were outbalanced by economic perspective. At the policy level 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 was predominately perceived as a tool to achieve government goals. That is why the discussion was carried out mainly within the field framed by legal and regulations rules. At the organization level, PPP

was perceived as one of the arrangements for providing public services in municipalities. This subset also includes works on PPP market analysis in Poland and other countries.

The two ways of PPPs understanding also dominates if we consider finance perspective. In finance-relating research the discussion was dominated by 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 was most frequently analyzed in the management context. However, on that level, an important part of the analysis has been conducted from finance perspective (e.g. capital structure, rules and techniques of project finance).

A small part of articles in the studied set undertook research on PPPs at the level that represents the symbol of governance (11). From that perspective, the 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 and their impact on implementing and conducting PPP projects. However, the sample of articles that could be categorized into this research area is limited.

If we consider the applied methodology, 157 of the 172 articles were categorized as non-empirical reviews of existing literature, concepts, or practices. This subset also includes articles that were supported by elements of empirical data analysis, but without clearly indicated methodology of collecting and compiling the data. Out of the remaining ones, 5 articles were qualitative, while 10 employed quantitative methods (interviews, case studies).

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

Citations analysis indicates that there is a low negative correlation (-0,24) between the citations number and the 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 the most popular articles were published in “Samorząd Terytorialny” (see Table 3).

Table3. Top Journals 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

*according to the BAZEKON and GoogleScholar, date: 05.12.2014.

Source: Own calculations based on BAZEKON and GoogleScholar

To sum up, it seems that in Poland, in contrast to international experiences, economic threads relating to PPP issues are most popular. The authors focus primarily on such aspects of PPPs as mechanisms of political coordination and the role of public and private partners in the process of PPPs implementation. Nevertheless, nationwide PPP-related research in management and finance disciplines also constitutes a valuable source of knowledge allowing to understand 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, a systematic review shall not be perceived as a tool lacking limitations. For instance, the application of this methodology excludes monograph analysis. Moreover, systematic literature review considers only publications indexed in the online databases, and has high sensitivity to inappropriate choice of keywords.

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

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

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