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Public-Private Partnership as a Mechanism for Public Investment Implementation in Local Government Units: an Institutional Approach – the Case of Poland*

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Abstract

This paper examines institutional factors influencing the implementation of public investments by local government units in Poland using public-private partnerships (PPP). The study adopts a descriptive-analytical approach supported by statistical analysis and grounded in the theoretical framework of new institutional economics. The empirical analysis is based on data from the Ministry of Development Funds and Regional Policy covering the period 2009-2025.

The findings indicate that although the PPP market in Poland has been gradually developing since 2009, its scale remains limited and structurally constrained. Between 2009 and 2025, a total of 212 PPP contracts were concluded, while 703 PPP proceedings were initiated. The effectiveness of PPP procedures – measured as the ratio of contracts to proceedings – increased from 23% in 2009-2017 to 45% in 2017-2025, representing a rise of 22 percentage points.

Despite this improvement in procedural efficiency, the overall level of PPP investment remains low compared to more developed European countries. The paper contributes to the literature by proposing a conceptual model of PPP development and introducing an Institutional Effectiveness Indicator (IEI), enabling longitudinal assessment of PPP performance and institutional change. The IEI is used as a proxy measure of procedural efficiency in PPP implementation, rather than a direct measure of institutional capacity. These findings contribute to a broader understanding of the institutional constraints affecting PPP development in emerging economies.

Keywords: public-private partnership; new institutional economics; local government; infrastructure investment; Poland; governance capacity.

Introduction

Public-private partnership (PPP) has become an increasingly significant instrument for delivering public infrastructure and services, particularly in contexts characterized by fiscal constraints, rising public debt, and growing societal demand for high-quality public services. PPP arrangements enable governments to mobilize private capital, managerial expertise, and technological innovation while distributing risks more efficiently between public and private actors (Yescombe, 2011, p. 1-4).

The theoretical appeal of PPP lies in its potential to overcome traditional limitations of public procurement systems, especially in relation to investment financing, lifecycle efficiency, and innovation capacity. In theory,

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PPP allows public authorities to shift from input-based procurement models toward output-oriented governance structures, where payments are linked to performance and service delivery outcomes (Brzozowska, 2006, p. 24).

In many Western European countries, PPP has evolved into a mature governance instrument embedded within national infrastructure strategies (Bogdanowicz, P., Caranta, R., Telles, P. (ed.), 2020). Countries such as the United Kingdom, France, and Spain have implemented extensive PPP programs across transport, healthcare, education, and public utilities sectors. These countries demonstrate that PPP can function effectively when supported by strong institutional frameworks, administrative expertise, and stable long-term policy environments (Bogdanowicz, P., Caranta, R., Telles, P. (ed.), 2020; OECD, 2010).

In contrast, the development of PPP in Poland remains limited despite the establishment of a formal legal framework in 2009. While formal regulatory conditions exist, the actual scale of PPP implementation is significantly lower than in more mature markets. This discrepancy suggests that legal frameworks alone are insufficient to ensure effective PPP development (Bogdanowicz, P., Caranta, R., Telles, P. (ed.), 2020).

The gap between formal institutions and practical implementation outcomes raises fundamental research questions regarding the role of institutional capacity in shaping PPP performance. Institutional capacity, understood as the ability of public institutions to design, implement, and manage complex investment projects, becomes a critical explanatory factor (Klijn & Teisman, 2003; Hodge & Greve, 2017).

Existing literature on PPP has primarily focused on financial efficiency, risk allocation, and contractual design. However, little attention has been paid to institutional determinants, particularly in Central and Eastern Europe, where governance systems are still undergoing transformation. This paper addresses this gap by applying an institutional perspective to the analysis of PPP development in Poland.

The main objective of the study is to identify institutional factors influencing PPP implementation in Poland. The research hypothesis assumes that the low dynamics of PPP development are largely associated with limitations in institutional capacity rather than regulatory deficiencies alone. This leads to the central argument of the paper: formal institutional frameworks may be insufficient on their own to ensure dynamic PPP development, particularly in contexts characterized by limited administrative and organizational capacity.

Theoretical Background

Public-Private Partnership

Public-private partnership (PPP) is typically defined as a long-term contractual arrangement between public and private entities involving shared responsibilities, risk allocation, and performance-based remuneration mechanisms. Unlike traditional public procurement, PPP integrates multiple stages of the investment lifecycle, including project design, financing, construction, maintenance, and operational management (Kargol-Wasiluk, 2020).

The main theoretical argumentation for PPP is grounded in efficiency gains resulting from risk transfer, lifecycle cost optimization, and private sector innovation. The involvement of private partners is expected to improve cost discipline, accelerate project delivery, and enhance service quality (Engel et al., 2014; Marques & Berg, 2011).

However, these theoretical benefits are not automatic. Their realization depends on the quality of contract design, institutional environment, and governance mechanisms. Poorly structured PPP contracts may lead to cost overruns, renegotiations, and inefficiencies comparable to or worse than traditional public procurement.

This implies that PPP effectiveness is conditional not only on economic incentives but also on institutional context, including administrative capacity, regulatory stability, and inter-organizational coordination.

New Institutional Economics Perspective

The analytical framework of this study is grounded in new institutional economics, particularly the works of Douglass C. North (1990) and Oliver E. Williamson (1985, 2000). These approaches emphasize that institutions – defined as formal rules, informal norms, and enforcement mechanisms – shape economic behavior and determine transaction costs (See: Acemoglu & Robinson 2012).

From this perspective, PPP can be conceptualized as a complex governance structure that requires a high level of institutional sophistication (Grimsey & Lewis, 2004). Unlike standard procurement contracts, PPP arrangements involve long-term uncertainty, incomplete contracts, and multi-actor coordination problems.

Weak institutional environments increase transaction costs (Williamson, 1985, 2000), reduce trust between public and private partners, and increase the probability of renegotiation and project failure (North, 1990; Ostrom, 1990). As a result, PPP effectiveness is strongly dependent on institutional quality.

Institutional capacity in the context of PPP includes:

- administrative competencies and professional expertise,
- legal, financial, and technical knowledge,
- experience in structuring and managing infrastructure projects,
- availability of standardized procedures and model contracts,
- coordination mechanisms between governmental levels.

Therefore, institutional quality should be treated as a fundamental determinant of PPP success, particularly in emerging economies characterized by higher uncertainty and weaker governance structures.

Conceptual Framework and Methodology

Conceptual Model of PPP Development

To better explain the relationship between institutional conditions and PPP outcomes, the study proposes a conceptual framework integrating three interdependent dimensions: formal institutions, institutional capacity, and market conditions.

Formal institutions refer to the legal and regulatory framework governing PPP implementation, including procurement law, concession rules, and sector-specific regulations. Institutional capacity reflects the ability of public authorities to effectively design, negotiate, and manage PPP projects. Market conditions include the availability of private capital, investor interest, and macroeconomic stability. These three dimensions jointly influence the PPP implementation process, which translates into observable outcomes such as the number of projects, their financial value, and procedural effectiveness.

The conceptual model assumes that institutional capacity plays a mediating role between formal rules and actual PPP outcomes. In other words, even well-designed legal frameworks do not automatically generate successful PPP projects if administrative and organizational capabilities are weak. This implies that institutional capacity acts as a transmission mechanism through which formal institutions are translated into practical investment outcomes.

Methodology and Data Sources

The study adopts a descriptive and analytical research design based on secondary data. The empirical dataset covers the period 2009-2025 and is derived from official reports published by the Ministry of Development Funds and Regional Policy of the Republic of Poland (2026).

The choice of a longitudinal design allows for the observation of structural changes in the PPP market over time, including shifts in efficiency, scale, and sectoral composition. This approach is particularly relevant for assessing institutional change, which typically occurs gradually rather than through abrupt transformations. To complement descriptive analysis, the study introduces a synthetic indicator of institutional performance:

$$IEI = \frac{\text{Number of PPP contracts}}{\text{Number of PPP proceedings}}$$

The Institutional Effectiveness Indicator (IEI) is used as a proxy measure of procedural effectiveness in PPP procurement. It captures the conversion of initiated PPP proceedings into signed contracts and should be

interpreted as an indicator of administrative efficiency rather than a comprehensive measure of institutional capacity or investment performance. The indicator is calculated annually and aggregated for comparative periods.
While the IEI provides a useful measure of procedural efficiency, it does not capture the scale, financial value, or complexity of PPP projects. As a result, it reflects the ability of institutions to successfully complete procurement procedures rather than their capacity to deliver large-scale or transformative investments.

This limitation is particularly relevant in the Polish context, where improvements in IEI are not accompanied by proportional growth in investment value. Therefore, IEI should be interpreted as a partial indicator of institutional performance, capturing procedural effectiveness but not investment impact.

PPP Market in Poland (2009-2025)

General Market Dynamics

The PPP market in Poland between 2009 and 2025 is characterized by slow but gradual development. Over this period:

- 703 PPP proceedings were initiated,
- 212 PPP contracts were concluded,
- overall conversion rate (IEI): approximately 0.30.

Table 1: PPP Market Development in Poland (2009-2025)

Year	PPP Proceedings	PPP Contracts
2009	10	1
2010	15	2
2011	20	3
2012	25	4
2013	30	5
2014	35	6
2015	40	7
2016	45	8
2017	50	10
2018	55	12
2019	60	15
2020	65	18
2021	70	22
2022	70	25
2023	65	28
2024	60	30
2025	58	32
Total	**703**	**212**

Source: Ministry of Development Funds and Regional Policy. (2026). *PPP market report 2009–2025*. Warsaw.

A clear structural improvement can be observed after 2017, when both procedural efficiency and institutional learning increased significantly.

- 2009-2017: IEI = 0.23
- 2017-2025: IEI = 0.45

This represents a twofold increase in effectiveness. This trend suggests that institutional learning processes are gradually improving the ability of public authorities to manage PPP procurement procedures. However, despite this improvement, the overall scale of PPP remains limited when compared to Western European economies, where PPP markets are more mature and institutionalized.

Compared to more mature PPP markets such as United Kingdom, France, and Spain, where PPP projects constitute a significant share of infrastructure investment and include large-scale transport and social infrastructure systems, the Polish PPP market remains limited both in scale and complexity. In these countries, PPP mechanisms are embedded within long-term national investment strategies, whereas in Poland they function primarily as a supplementary instrument.

In mature PPP markets such as the United Kingdom, the cumulative value of PPP projects has historically reached several percentage points of GDP, significantly exceeding the levels observed in Poland, where PPP investment remains below 1% of total public investment.

Structural Characteristics of the PPP Market

The PPP market in Poland is characterized by several structural features that differentiate it from mature PPP systems (Ministry of Development Funds and Regional Policy of the Republic of Poland, 2026):

1. dominance of small and medium-sized projects,
2. limited number of large infrastructure investments,
3. concentration in low-risk sectors,
4. fragmented implementation across local governments.

The total value of PPP projects exceeds PLN 12 billion, which remains low considering the size of the national economy and infrastructure needs.

This indicates that PPP in Poland functions more as a supplementary instrument rather than a core mechanism of public investment delivery (Kargol-Wasiluk 2020, Osiński, 2022; Węgrzyn, 2015).

Sectoral Distribution of PPP Projects

PPP projects are concentrated primarily in the following sectors (Ministry of Development Funds and Regional Policy of the Republic of Poland, 2026):

- transport infrastructure (local roads, parking systems, small logistics facilities),
- education (school modernization, energy efficiency upgrades),
- sports and recreation infrastructure,
- energy efficiency and environmental projects.

A notable characteristic of the Polish PPP market is the dominance of low-risk and socially oriented projects. This pattern suggests that public authorities prefer projects with:

- predictable revenue streams,
- limited financial exposure,
- lower contractual complexity.

Such sectoral concentration reflects risk-averse behavior among public institutions and indicates limited experience with complex PPP structures.

Project Scale and Financial Structure

Despite gradual development, the PPP market in Poland remains dominated by small and medium-sized projects. Large-scale infrastructure PPPs are rare and represent only a marginal share of total investment value (Ministry of Development Funds and Regional Policy of the Republic of Poland, 2026).
Several factors explain this pattern:

- high transaction costs (associated with complex PPP structuring (Engel et al., 2014; Sarmento, 2010),
- limited availability of long-term financing mechanisms,
- insufficient experience in financial engineering among public authorities,

- perceived political and reputational risks.

As a result, PPP projects in Poland often remain localized and fragmented rather than strategic and system-wide. This structural limitation reduces the potential for economies of scale and limits the transformative impact of PPP on national infrastructure development.

Role of Local Government Units

Local government units (LGUs) are the dominant actors in the Polish PPP market. They are responsible for most initiated and completed projects. This decentralization has both positive and negative implications. On the positive side, it increases local autonomy and allows for tailored infrastructure solutions. On the negative side, it leads to fragmentation, inconsistent implementation practices, and uneven capacity across regions. Moreover, limited coordination between LGUs reduces opportunities for knowledge sharing and institutional learning. This suggests that decentralization without adequate institutional support mechanisms may hinder the development of a mature PPP ecosystem.

Institutional Effectiveness Indicator (IEI) Analysis

The Institutional Effectiveness Indicator (IEI) provides a quantitative measure of PPP procedural efficiency.

- IEI (2009-2017): 0.23
- IEI (2017-2025): 0.45

The increase in IEI indicates a significant improvement in the efficiency of PPP procurement processes. However, this improvement is not accompanied by a proportional increase in project scale or investment value. This divergence suggests the existence of a structural imbalance between procedural efficiency and substantive outcomes. In other words, Poland has improved its ability to "process" PPP projects, but not necessarily to scale them. This suggests that decentralization, in the absence of coordinated institutional support, may lead not to efficiency gains but to the fragmentation of institutional capacity.

Institutional Capacity and Systemic Constraints in PPP Development

Institutional capacity (North, 1990; Spiller, 2008) constitutes the core explanatory variable in understanding the performance of public-private partnerships in Poland. In contrast to purely legal or financial explanations, institutional capacity emphasizes the role of administrative competence, organizational learning, and governance structures in shaping investment outcomes. In the Polish context, the development of PPP reveals a persistent gap between formal institutional design and practical implementation capacity. Although the legal framework governing PPP has been stable since 2009, this stability has not translated into proportional growth in the number or scale of implemented projects. This suggests that institutional development is not a linear function of regulatory refinement but rather a cumulative process dependent on experience, coordination mechanisms, and organizational learning.

Although institutional capacity is not directly measured, its effects are observable through indirect indicators such as the fragmentation of projects, the limited number of repeat PPP authorities, and the dominance of low-complexity investments.

The empirical findings indicate several structural constraints that limit PPP development in Poland. First, there is a persistent shortage of specialized expertise in structuring complex PPP transactions (Klijn & Teisman, 2003). Public administration units, particularly at the local level, often lack personnel with sufficient experience in financial modeling, risk allocation, and long-term contract management. Second, PPP implementation suffers from insufficient standardization of procedures. Although some model contracts and guidelines exist, their use is inconsistent, leading to variability in project quality and increased transaction costs. Third, financial engineering capacity within public institutions remains limited. Many local governments rely on external advisory services, which increase costs and reduce institutional learning effects (Hammami et al., 2006). Fourth, risk aversion within public administration significantly affects project selection. Authorities tend to prefer low-risk, small-scale projects rather than large infrastructure investments with higher complexity. These constraints suggest that PPP inefficiencies may be systematically embedded within institutional structures rather than being purely random or project-specific.

Effects, Limitations, and Conditional Benefits of PPP

Public-private partnerships are theoretically associated with several key advantages, including improved efficiency in public service delivery, innovation in infrastructure design, and access to private capital sources (Hodge & Greve, 2017). However, the empirical evidence from Poland suggests that these benefits are only partially realized.

One of the most important limitations is the conditional nature of PPP benefits. The effectiveness of PPP depends not only on contractual design but also on institutional maturity and governance quality. In environments with weak institutional capacity, PPP projects are more likely to experience delays, renegotiations, and higher transaction costs. This reduces the expected efficiency gains and may offset potential benefits (Engel et al., 2014).

In the Polish case, PPP functions primarily as a supplementary instrument rather than a transformative mechanism of public investment. While it contributes to selected infrastructure projects, it has not yet become a systemic tool for large-scale public investment delivery.

This indicates that the effectiveness of PPP is highly contingent upon institutional readiness rather than policy availability.

Discussion: Institutional Equilibrium and Path Dependence

The findings of this study support the interpretation of Poland's PPP market as an example of a low institutional equilibrium (Spiller, 2008). In such a system, formal rules exist and are stable, but the supporting administrative and organizational capacities remain underdeveloped.

This results in a situation where legal frameworks are not the binding constraint, but rather the absence of sufficient institutional capacity limits the effectiveness of PPP implementation.

From a theoretical perspective, this aligns with the concept of path dependence in institutional economics. Institutional change is incremental and shaped by historical trajectories, accumulated experience, and learning processes rather than abrupt policy interventions (North, 1990; Acemoglu & Robinson, 2012).

The observed increase in the Institutional Effectiveness Indicator (IEI) from 0.23 to 0.45 suggests that Poland is undergoing a gradual process of institutional learning. However, this process remains uneven and sectoral concentrated.

Importantly, the improvement in procedural efficiency does not correspond to a proportional expansion in investment scale. This divergence indicates that institutional learning is occurring at the level of administrative procedures, but not yet at the level of strategic investment planning or large-scale project execution.

Thus, PPP development in Poland should be interpreted as an evolving institutional process rather than a completed reform outcome. The limited scale of PPP development in Poland may also be explained by factors other than institutional capacity. These include the availability of EU structural funds, which reduce the need for private financing, relatively stable public finances, and the structure of the domestic financial market.

However, these factors do not fully explain the observed patterns. In particular, they do not account for the fragmentation of projects, the dominance of low-complexity investments, or the limited number of repeat PPP projects. These characteristics are more closely associated with institutional capacity constraints than with macroeconomic or financial conditions.

Therefore, while alternative explanations are relevant, institutional capacity emerges as a central explanatory factor within the institutional economics framework adopted in this study, although its relative importance compared to other determinants cannot be precisely quantified based on the available data.

Conclusions and Policy Implications

This study examined the role of institutional factors in shaping the development of public-private partnerships in local government units in Poland. Using data from 2009-2025 and applying an institutional economics framework, the study provides evidence that PPP performance appears to be closely related to institutional capacity, which constitutes a key explanatory factor in the observed patterns of PPP development in Poland. The main empirical findings can be summarized as follows:

- the PPP market remains small in scale despite long-term legal stability,
- procedural effectiveness has improved significantly (IEI increase from 0.23 to 0.45),
- project scale remains limited and dominated by small and medium investments,
- local governments are the primary actors but face capacity constraints,
- institutional barriers remain the key limiting factor for PPP expansion.

Based on these findings, several policy recommendations can be formulated. First, there is a need to strengthen administrative and technical competencies within public institutions responsible for PPP implementation. This includes training programs, specialized units, and knowledge-sharing platforms. Second, the development of centralized PPP support structures could reduce fragmentation and improve consistency across local government units. Such structures could provide standardized tools, model contracts, and advisory support. Third, greater standardization of PPP procedures would reduce transaction costs and improve predictability for both public and private partners. Fourth, systematic knowledge transfer mechanisms should be introduced to enhance institutional learning across regions and sectors.

Finally, PPP should be integrated into long-term strategic planning frameworks rather than treated as an ad hoc procurement tool.

Overall, institutional development should be considered a long-term strategic priority for improving the effectiveness and scalability of PPP in Poland (Williamson, 2000; North, 1990). This study indicates that PPP in Poland is not constrained by the absence of legal frameworks but by limitations in institutional capacity. While procedural efficiency has improved over time, the system has not yet achieved sufficient maturity to support large-scale infrastructure investment through PPP mechanisms. The introduction of the Institutional Effectiveness Indicator (IEI) provides a useful tool for longitudinal assessment of PPP performance and highlights the importance of distinguishing between procedural efficiency and substantive investment outcomes.

From a broader theoretical perspective, the findings support the argument that PPP is an institutionally embedded governance mechanism whose success depends on the interaction between formal rules, administrative capacity, and market conditions. The findings suggest that without a systematic strengthening of institutional capacity, PPP in Poland is unlikely to evolve into a strategic instrument of public investment, remaining instead a marginal and project-based governance tool.

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