

Governance of Public-Private Collaborations for needs of Czechia:

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Best Practice in Selected European Countries: France, Germany, United Kingdom

GLOBSEC

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www.globsec.org

June 2024

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Executive Summary

This report analyses the critical role of Public-Private Collaborations (PPCs) in addressing the infrastructure investment gap in Czechia by examining best practices from France, Germany, and the United Kingdom. It provides a comprehensive overview of the investment gap, opportunity costs, economic benefits of infrastructure investments, and the limitations of public financing.

Infrastructure Investment Gap

The infrastructure investment gap is a significant issue globally and particularly pronounced in Central and Eastern Europe, including Czechia. This gap reflects the disparity between the current investment levels and what is necessary to meet societal needs and support economic growth. The gap is driven by factors such as urbanization, population growth, and the need for sustainable infrastructure.

Opportunity Costs

Failure to address the infrastructure investment gap results in substantial economic costs. Inadequate investment leads to deteriorating infrastructure, impacting economic productivity and growth. The European Investment Bank estimates that Europe needs to invest approximately €830 billion annually to sustain economic growth and competitiveness, with significant portions allocated to energy and transportation sectors.

Economic Benefits of Infrastructure Investments

Investments in infrastructure lead to higher productivity, economic growth, and improved public service delivery. They create jobs, stimulate economic activity, and promote innovation and industrial upgrading. Studies indicate that infrastructure investments have a high rate of return, emphasizing their importance for long-term economic sustainability.

Limitations of Public Financing

High levels of public debt and fiscal constraints hinder infrastructure investments in Czechia. The European Union's fiscal rules, which limit government debt and deficits, pose additional challenges. Innovative financing mechanisms, such as PPCs, are essential to bridge the investment gap without exacerbating fiscal vulnerabilities.

Key Benefits of Public-Private Collaborations

PPCs bring numerous benefits, including cost savings, improved service quality, accelerated service rollout, and access to advanced technologies. They enable better risk management, ensure outcomefocused service delivery, and strengthen the domestic private sector. PPCs also offer value for money and efficiency in operations, contributing to economic diversification.

PPCs Suitability for Other Sectors such as Healthcare and Education

The potential for using Public-Private Collaborations in other sectors such as healthcare as well as education is significant, offering numerous advantages including enhanced efficiency and costeffectiveness. By leveraging private sector expertise and resources, PPCs facilitate the timely delivery of high-quality social infrastructure and services, as evidenced by successful projects in Germany and other European countries.

Case Studies

France has successfully leveraged PPCs, particularly through long-term concession agreements in transport and other sectors. The establishment of dedicated PPC units and a robust legal framework supports the efficient implementation of these projects.

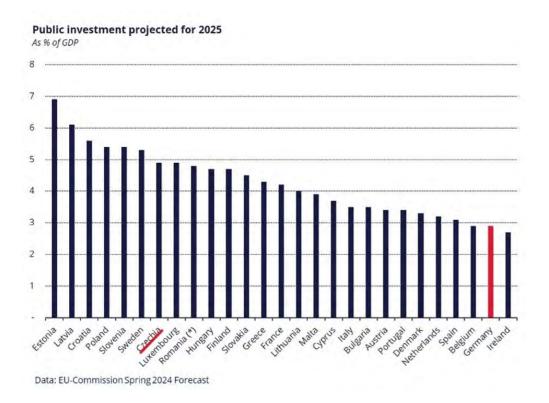
Germany's PPCs span various sectors, with significant contributions to motorway expansions and public amenities. The country employs multiple contract models, such as the Erwerbermodell and Inhabermodell, to structure these collaborations effectively. The Federal PPP Task Force plays a crucial role in facilitating these projects.

The UK's PPCs, initiated through the Private Finance Initiative (PFI) and its successors, have transformed public infrastructure development. The Mutual Investment Model (MIM) introduced by the Welsh Government exemplifies innovative financing for public projects, emphasizing transparency and community benefits.

Recommendations for Czechia

To enhance the management and success of PPCs, Czechia should establish a dedicated agency for cross-sectoral PPCs. This agency would centralize expertise, streamline processes, improve risk management, and develop a robust legal and regulatory framework. It would also facilitate government commitment, capacity building, financial management, and stakeholder engagement, ensuring the long-term sustainability of PPC projects.

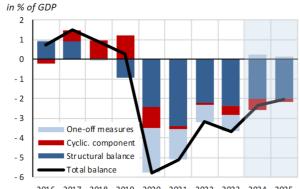
Current State of (Public) Investments in Czechia



The Czech Republic showcases a favourable entrepreneurial landscape with low business initiation costs and robust financial sector stability, as highlighted by the recent World Bank report. While the impacts of the recent pandemics and energy crisis remain uncertain, the country's insolvency framework receives high praise, attracting potential infrastructure investments. However, a lack of a national infrastructure plan and dedicated agency for Public-Private Collaborations (PPCs) present opportunities for improvement. With the lowest private infrastructure investment among High Income Countries, enhancing private sector engagement could ensure cost efficiency and innovative advancements in infrastructure development, ultimately fostering economic growth and competitiveness.

Inevitable Fiscal Consolidation in 2024 and 2025

Graph: General Government Balance



2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 Source: CZSO (2024a, 2024b). MF CR forecast and calculations.

As per Convergence Program submitted to EC, the Czech Republic is enacting a comprehensive fiscal consolidation package aimed at reducing the state budget deficit by approximately CZK

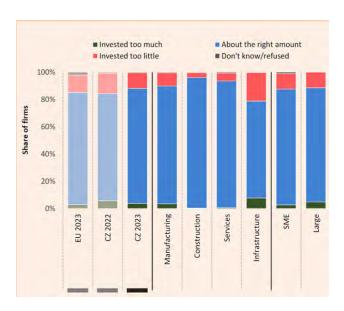
150 billion over 2024 and 2025. **Key measures** include a reduction in subsidies, savings in operating expenses, an increase in corporate income tax, reinstatement of employee sickness insurance, higher property taxes, and the elimination or limitation of several tax exemptions. Concurrently, the government is advancing pension reforms to align the retirement age with life expectancy and modify the pension calculation to lower replacement rates. Healthcare efficiency is being targeted through the CZ-DRG system for hospital reimbursements and the introduction of voluntary supplementary insurance. Strategic investments in nuclear energy, transport infrastructure, and critical raw materials are being promoted through accelerated construction processes and the establishment of a State Investment and Development Company. Efforts to enhance the transparency and efficiency of public finances include a new law on financial management and control, better coordination between control authorities, and a unified inspection recording portal, all in preparation for the new EU fiscal framework.

Country Specific Recommendations of EC Emphasise Strategic Investments

In Country-Specific recommendations by EC from June 2024, a strong emphasis is placed on strategic investments across sectors to bolster the Czechia's long-term competitiveness and foster economic growth. It underscores the importance of accelerating investments and maintaining momentum in implementing reforms specified in the Recovery and Resilience Plan, particularly highlighting the REPowerEU chapter as integral to achieving sustainable transitions. Furthermore, there is a call to mobilize private sector resources through innovative financial instruments, focusing on energy efficiency, clean energy solutions, and business development. Investments in innovation and technology transfer are deemed essential, aiming to bridge the gap between academia and industry, unlock innovation potential, and enhance competitiveness. Additionally,

addressing skills mismatches through investments in tertiary education and labour market participation is identified as crucial for overcoming workforce challenges and sustaining economic progress. The document signals a comprehensive strategy urging Czechia to strengthen administrative capacity for efficient fund absorption, especially in regions facing development disparities, while also advocating for a strategic approach to public administration talent management to drive effective investment outcomes and policy implementation.

Restrained Investment Climate as per EIB Survey



The **EIB Investment Survey** 2023 for the Czech Republic reveals several critical investment restraints for firms, with energy costs emerging as the most significant obstacle, affecting 94% of businesses—significantly higher than the EU average of 83%. Uncertainty about the future is another major constraint, cited by 80% of firms. Despite improvements in various areas, the availability of skilled staff continues to be a notable barrier for 72% of companies, although this marks a decrease from 83% in the previous survey. Other impediments such as demand for products and services, **transport infrastructure**, financing, labour market regulations, and skilled staff have also eased compared to the prior year. Moreover, only 36% of firms perceive the availability of finance as

an obstacle, which is lower than the EU average of 44%, and the proportion of financially constrained firms has decreased to 3.4%, below the EU average of 6.1%. While 11% of firms in the Czech Republic believe they invested too little over the past three years., infrastructure firms (21%) are the most likely to say they invested too little.

Recovery and Resilience Plan Assists with Investment until 2026

Czechia's **Recovery and Resilience Plan** emerges as a strategic response to the dual imperatives of economic recuperation and future resilience in the aftermath of the pandemic and energy market upheavals. This comprehensive plan represents a complex approach aimed at fostering sustainable growth and societal well-being, predominantly through bolstering green and digital transitions. Comprising 105 investment streams and 58 reforms, the plan strategically allocates funds, with 43% earmarked for climate objectives and 23% for digital advancements. **Noteworthy investments** include €1.6 billion for energy efficiency renovations, €907 million for renewable energy sources, and substantial funding dedicated to enhancing healthcare infrastructure and addressing educational inequalities.

A pivotal focus of Czechia's plan lies in fortifying its economic and social resilience landscape. Through measures targeting business environment improvements, educational accessibility, and healthcare resilience, the nation seeks to navigate challenges posed by automation, energy transitions, and societal disparities. The plan's alignment with EU initiatives like the REPowerEU measures underscores Czechia's commitment to reducing fossil fuel reliance and accelerating green energy adoption. With an ambitious timeline demanding all milestones be achieved by August 2026, Czechia's Recovery and Resilience Plan signifies a strategic roadmap towards a sustainable, digitized future built on innovation, inclusivity, and economic vitality.

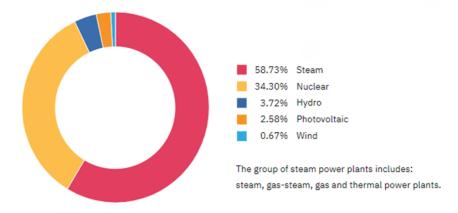
Recent Investment Case Study from Czech Railways

The European Investment Bank (EIB) has recently approved a significant CZK13 bn (EUR 520 mil) loan agreement with the Czech Ministry of Finance to bolster railway infrastructure in the Czech Republic, focusing on critical upgrades such as the installation of ERTMS and safety enhancements conducted by infrastructure manager SZ. This substantial funding will not only prioritize augmenting level crossing safety measures to avert potential accidents leading to 30-40 fatalities annually but also extend to improving station accessibility through 40 sub-projects set for completion by 2028. With an ambitious scope, the EIB's investment is projected to benefit as many as 90 million passengers and facilitate the transport of over 8 million tonnes of freight per year, showcasing its pivotal role in fortifying the nation's transport network.

Investment in Energy Transition

In the first half of 2024, Czechia's energy sector is undergoing significant transformations towards clean and sustainable practices, epitomized by a strong focus on hydrogen technology and wind energy, says the most recent **FDI report** of Czech Invest. The European Green Deal drives these initiatives, with Czechia embracing hydrogen as a vital component of its energy mix, aligning with EU directives. The country showcases promising advancements in renewable hydrogen production and plans for importation, demonstrating a strategic shift towards eco-friendly energy solutions. Daido Metal's transition from automotive bearings to wind turbine components symbolizes Czechia's commitment to green energy, supported by collaborations with leading wind turbine manufacturers. Despite potential in wind energy covering up to 20% of the country's consumption, challenges like grid capacity limitations and public scepticism persist.

Graph: Production of electricity in individual types of power plants. 2012-2022 (GWh)



Source: Energy Regulatory Office, 2023

Annual EUR1.2bn Investment Gap in Green Transition Alone

The comprehensive analysis of investment gaps and requirements for the Czech Republic conducted by **IKEM** underscores the critical need for enhanced financial commitments to attain the nation's 2030 climate and energy objectives. With a specific focus on the building sector and renewable energy supply segment, the report reveals staggering figures: an annual investment necessity of EUR 1,276 million for building renovations and integrated renewable energy systems, far surpassing the current level of EUR 612 million estimated in the prior report. Furthermore, the document underscores a remarkable six-fold surge in investment demands for renewable energy supply, projecting an annual EUR 690 million requirement up to 2030, signifying a significant gap from the modest 98 million euros invested in 2017. This substantial disparity underscores the inadequacy of existing financing and support **mechanisms** in propelling the Czech Republic towards its 2030 targets, highlighting an urgent call for intensified efforts and recalibration of policies to foster the transformation towards an efficient, lowcarbon economy.

Missing Comprehensive National Infrastructure Investment Plan

Czechia's National Reform Programme (NRP) 2024, recently approved by the government, highlights the country's strategic approach towards addressing immediate and future infrastructural needs. However, there appears to be an absence of a comprehensive national investment plan that encompasses long-term infrastructure development beyond the annual reform programmes. This gap is particularly critical given the significant challenges and opportunities presented by digital and green transitions, as well as the need for enhanced energy security. The NRP emphasizes short-term reforms and investments, particularly in digitalization and green infrastructure, while transitioning to mediumterm fiscal-structural plans in 2024. Furthermore, while the updated National Recovery Plan outlines immediate measures for recovery and resilience post-pandemic, it does not substitute for a detailed, long-term national investment strategy that integrates these initiatives into a cohesive framework. As such, there is a critical need for Czechia to develop and implement a comprehensive national investment plan to ensure sustained economic growth and infrastructural resilience.

0.55%

3.55%

View data in

\$ USD | % of GDP

Current trends

Investment need ☐ — Investment need inc. SDGs.

Export Chart v

Issue at Hand: What is Public **Infrastructure Investment Gap?**

Total factor productivity growth, along with stable macroeconomic environment supported by structural economic reforms and capital formation rank among the three key drivers of economic potential growth. In order to support sustainable growth, the systematic investments, both in corporate sector, but equally important also in public investments is thus an inevitable prerequisite for expansion of macroeconomic variables as well as living standards.

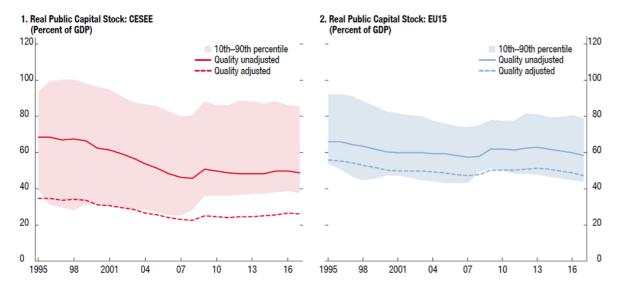
Therefore, the infrastructure investment gap is a critical global economic issue, reflecting the difference between the current level of infrastructure investment and what is required to meet societal needs and support potential economic growth. This gap in central and eastern Europe is substantial and has significant implications for public policy, economic development, and social well-being (see IMF Chart below).

The infrastructure investment gap is fundamentally about the disparity between the infrastructure capital demand and the actual capital supply. This gap is widening due to factors such as urbanization, population growth, and the pressing need for sustainable and resilient infrastructure solutions (PwC, 2020).

Global estimates place the annual infrastructure investment need at approximately US\$3.9 trillion globally, with emerging markets facing the greatest demands. This need encompasses various sectors, including transportation, energy, water, and digital infrastructure (PwC, 2020).

The McKinsey Global Institute estimates an annual infrastructure investment need of \$3.3 trillion through 2030 to support expected global growth. However, actual investment levels fall short by about \$350 billion annually, highlighting a significant investment gap (AECOM, 2021).





Sources: IMF, Fiscal Monitor database; World Economic Forum; and IMF staff calculations. Note: The quality adjusted measure is based on the World Economic Forum measure of overall infrastructure quality, which relies on business executives' assessments. Following IMF (2014), the adjustment marks down public investment flow in each period by the infrastructure quality score, which is then used to compute the stock of public capital next period. Lines indicate the GDP PPP-weighted average in each group. Bands indicate the respective cross-sectional 10th-90th percentile range. PPP = purchasing power parity.

Addressing such massive infrastructure gap requires not only increasing ongoing regular investment but also improving investment efficiency. Research using stochastic frontier analysis and data envelopment analysis shows that simply removing inefficiencies could significantly increase infrastructure output, potentially by 55% overall (IMF, 2023).

2.99%

Infrastructure investment at current trends and need

View by Estimate | Sector

Moreover, further significant challenge in closing the infrastructure investment gap is represented by the scarcity of "investable" projects. The lengthy project preparation process, including feasibility studies and permitting, is a barrier to turning potential project ideas into the bankable projects that can readily attract private investment (Worldbank, 2022).

Provided the issues of investment efficiency and pipeline of bankable projects is addressed, suitable business environment plays crucial role for investment decision. Multilateral development banks as well as international organizations emphasize the importance of creating favourable combination of political, institutional, and regulatory conditions in order to attract private investment into infrastructure. Project preparation and structuring facilities play a crucial role in improving project quality and reducing risks (IDB, 2019).

Provided all the prerequisite conditions are met and bankable projects are ready for embarkement, the issue of funding comes into play. That's when innovative funding models, such as public-private partnerships (PPPs), usage fees, value capture techniques, and government-subsidized financing programs, are essential for mobilizing additional resources to bridge the infrastructure gap (AECOM, 2019).

The lack of a universally agreed definition of infrastructure complicates efforts to measure and address the investment gap. Standardizing infrastructure taxonomies could improve investment decision-making and help close the gap (GIH, 2023).

For example, the Global Infrastructure Outlook employs a top-down econometric approach to estimate infrastructure investment needs under different scenarios, highlighting the importance of adopting best practices and controlling for economic and demographic factors to accurately forecast investment requirements (GIO, 2023).

Institutional investors, such as sovereign wealth funds and pension funds, hold significant potential for contributing to the closure of the infrastructure gap. Despite controlling over \$65 trillion in assets, their current investment in emerging markets'

Figure: Geographical Distribution of Sovereign Wealth Funds



Source: Sovereign Wealth Fund Institute

infrastructure remains less than 1%, underscoring the need for risk mitigation and regulatory reforms to attract private capital to infrastructure projects in low-income countries (Atlantic Council, 2022).

The World Bank estimates the infrastructure investment gap at approximately \$2.6 trillion annually, needed to meet sustainable development goals and maintain a trajectory towards net-zero emissions by 2050. Such gap results from a lack of well-developed project pipelines rather than a scarcity of capital, highlighting inefficiencies in project development and preparation stages (WB,

Public-private partnerships and innovative funding models are essential for bridging the infrastructure investment gap. However, the vast amount of undeployed private capital ("dry powder") indicates a disconnect between available funds and investable projects, primarily due to project risks and regulatory barriers (AECOM, 2021).

Opportunity Costs of Investment Gap

It is hence rather obvious, that infrastructure investment gap represents a significant challenge with far-reaching economic implications. It reflects the difference between the current investment levels in infrastructure and the amount needed to meet sustainable development goals, enhance productivity, and sustain economic growth. This gap has profound opportunity costs, affecting economies, societies, and the environment.

To start with, inadequate infrastructure investment can lead to deteriorating infrastructure, impacting economic productivity. The American Society of Civil Engineers suggests that the U.S. infrastructure funding gap could result in a loss of \$2.1 trillion over 10 years, eroding productivity and economic growth (Deloitte, 2021).

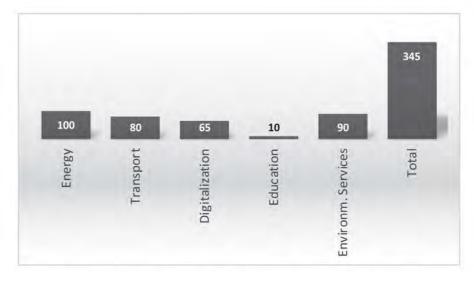
In Europe, similar concerns regarding infrastructure investment gaps echo those overseas, highlighting potential impacts on economic productivity and growth. The European Investment Bank suggests that Europe needs to invest approximately €830 billion annually in infrastructure, including energy, transport, water, and telecommunications, to sustain economic growth and competitiveness (EIB, 2021).

More specifically, the annual gap for achieving the EU's energy infrastructure aligned with the 2030 Climate and Energy Framework is estimated at €100 billion (**Berndt, 2016**). To meet its 2030 climate goals, the EU needs to increase annual investment by €406 billion (Euractiv, 2024). Last but not least, the investment required for a comprehensive green transition, including decarbonizing the economy, is around €520 billion annually (EEA, 2023).

Sustainable infrastructure investment in emerging markets is crucial for economic recovery, especially in the post-COVID-19 era. Investing in renewable energy, green transport, and other sustainable projects can create jobs, stimulate economic activity, and promote environmental sustainability (KPMG, 2021).

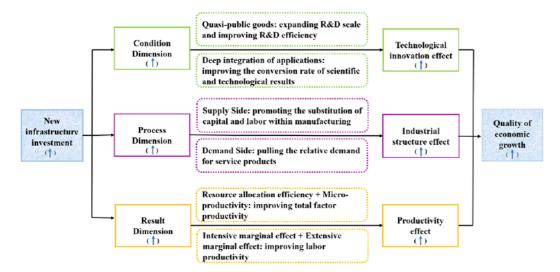
As another example, the Inter-American Development Bank reports that Latin America and the Caribbean region lose about 1 percentage point of GDP growth annually due to underinvestment in infrastructure. This amounts to a staggering \$900 billion loss over a decade, underlining the significant economic cost of the investment gap (IDP, 2019).

Figure: Annual Infrastructure Investment Gap in the EU until 2030 in €bn;



Source: Numbers Assembled from Berndt et al. (2016)

Figure: Theoretical Diagram of the Influence Mechanism of New Infrastructure Investment on Economic growth quality.



New infrastructure investment, has shown to enhance economic growth quality by improving innovation capacity, optimizing industrial structure, and increasing production efficiency. This suggests that closing the investment gap could have broad benefits for economic development and quality of life (MDPI, 2022).

The lack of timely and targeted infrastructure investment has implications for fiscal stimulus effectiveness. Infrastructure projects with long implementation lags and mismatched regional distribution can limit their impact as economic stimuli, underlining the need for well-planned and strategically located investments (Alpert, Boyle, 2023).

Addressing the infrastructure gap hence requires a complex approach, including enhancing governance to reduce waste in public investment. Improving infrastructure governance could potentially save countries an average of one-third of their infrastructure spending, translating into significant economic gains (IMF, 2020).

The Global Infrastructure Hub estimates an annual infrastructure investment gap of US\$650 billion through 2040. Bridging this gap is essential for promoting economic growth and competitiveness, emphasizing the need for sustainable investments that maximize economic, social, and environmental impacts (EBRD, 2022).

Finally, the opportunity costs of the infrastructure investment gap extend beyond immediate economic losses to include long-term impacts on societal well-being, environmental sustainability, and global competitiveness. Addressing this gap is crucial for achieving a prosperous, resilient, and sustainable future.

Economic Benefits of Infrastructure Investments

The economic benefits of infrastructure investments are vast and complex, impacting various sectors of the economy and contributing significantly to overall economic growth and development.

Infrastructure investments facilitate higher productivity and economic growth by improving trade connectivity and promoting economic inclusion. Emerging economies, in particular, require substantial investments to meet their infrastructure needs and achieve sustainable development goals, emphasizing the importance of quality infrastructure for inclusive growth and enhanced access (G20, 2019).

Infrastructure spending has a notable multiplier effect on the economy, creating demand and jobs, especially in the construction sector. This stimulates additional economic activity as workers spend their incomes, making infrastructure investment a potent tool for economic stimulation according to Keynesian economics. The effectiveness of such investments is enhanced by timely execution, targeting industries impacted by recessions, and addressing existing needs (Alpert, Boyle, 2023).

The Penn Wharton Budget Model indicates that while a \$2 trillion infrastructure investment plan could boost productivity, the benefits might be offset if financed through additional government borrowing. This scenario could crowd out private investment, leaving the overall GDP unchanged due to the counterbalancing effect of increased debt (Penn Wharton, 2021).

A study analysing data from 87 countries between 1992 and 2017 found that infrastructure investment, especially in electricity generation and telecommunications, has large positive longrun effects on GDP. This effect is even more pronounced in developing economies, highlighting the critical role of infrastructure in fostering economic growth across different stages of

development (Timilsina, Stern, 2023).

Infrastructure investment not only boosts aggregate demand and economic growth in the short run but also increases productivity in the long run by improving the public capital stock. The rate of return on infrastructure investments is estimated to be between 12.8% to 30% on average, showcasing the significant economic benefits of investing in infrastructure (EPI, 2017).

New forms of infrastructure investment, such as digital infrastructure are crucial for further economic development. By enhancing innovation capacity, improving industrial structure, and boosting efficiency, these investments can significantly elevate the quality of economic growth, particularly by stimulating technological innovation and promoting structural upgrading (MDPI, 2022).

Investments in energy, telecommunications, and transport networks support sustainable growth through supply and demand-side channels, reinforcing the importance of infrastructure in achieving long-term economic sustainability and growth (World Bank, 2022).

Limits for Financing of Infrastructure by Public Finance

The Central, Eastern, and Southeastern Europe (CESEE) region exhibits a pronounced infrastructure investment gap compared to the more developed EU15 countries, despite the critical role of infrastructure in promoting economic growth and convergence within the European Union. This gap, as identified by the International Monetary Fund (IMF), arises from a variety of fiscal, structural, and financing challenges, exacerbated by high levels of public debt and budget deficits (IMF, 2020).

The fiscal rules within the European Union, designed to ensure the stability of the euro by limiting government debt and deficits, have been critiqued for their rigidity, potentially hindering necessary public investments in infrastructure. These rules necessitate that member states maintain government deficits below 3% of GDP and debt below 60% of GDP, constraints which are particularly challenging for countries in the CESEE region that are striving to catch up in terms of infrastructure quality and capacity (EurActiv, 2023).

High levels of public debt deter infrastructure investment by crowding out private investment and raising the cost of government borrowing. This is further compounded in contexts where economic growth is sluggish, and debt levels are already above the EU's prescribed thresholds. Studies suggest that beyond a certain level of debt-to-GDP ratio (typically around 90-100%), the negative effects on economic growth become pronounced, thereby creating a vicious cycle where high debt levels stifle growth, which in turn makes it harder to reduce debt burdens (ResearchGate, 2022).

In the Central Europe, despite a relatively stable economic outlook and expectations of solid investment activity facilitated by the absorption of EU funds, the broader fiscal constraints present challenges to scaling up infrastructure investments significantly (Fitch, 2024). There is broader trend in the CESEE region, where despite comparable or even higher public investment rates as a percent of GDP, the public capital stock remains deficient (IMF, 2020).

To navigate these fiscal constraints, CESEE countries, may need to explore innovative financing mechanisms such as public-private partnerships (PPPs), EU funds, and green bonds. These tools can offer alternative financing sources for infrastructure projects, potentially easing the pressure on public finances while still addressing the critical investment gap.

Moreover, the IMF suggests that if infrastructure investments are appropriately calibrated, they need not compromise fiscal or external sustainability. This implies that with careful planning and prioritization of projects that promise high economic returns, countries can navigate the tightrope of stimulating growth through infrastructure investment without exacerbating fiscal vulnerabilities (IMF, 2020).

Cross-border projects in the CESEE region present an opportunity to leverage collective benefits from infrastructure investments, facilitating greater economic integration and efficiency gains. These projects, however, require coordination and funding mechanisms that transcend national fiscal constraints, highlighting the role of EU-wide initiatives and funding in bridging the infrastructure

The role of governance in managing the debtto-growth nexus is also pivotal. Many academic studies have shown that good governance can mitigate the negative impacts of debt on growth. This insight underscores the importance of transparent, accountable, and efficient public investment management as countries in the CESEE region navigate the complex interplay between fiscal constraints and infrastructure investment needs (NCBI, 2022).

Fiscal governance reform within the EU, aimed at providing greater flexibility and consideration for investments that have long-term growth implications, could benefit CESEE countries. Such reforms could offer a more nuanced approach to fiscal rules, allowing for strategic investments in infrastructure that are essential for economic convergence within the union (EurActiv, 2024).

Key Benefits of Public-Private Collaborations and Partnerships:

Cost Savings and Reduced Public Borrowing:

Collaborations between public and private sector ("PPC"), e.g. in the form of public-private partnership projects ("PPPs") often result in significant cost savings due to the efficiency and innovation brought by the private sector. This can alleviate the financial burden on public budgets, reducing the need for government borrowing and allowing for the redistribution of resources to other critical areas of public interest. These savings are achieved through better risk management and more efficient project delivery systems (IMF, 2001).

Improved Service Quality: The involvement of private entities in PPCs often drives higher standards of service quality. Competition within the private sector promotes innovation and efficiency, leading to the delivery of better-quality public services. The private sector's expertise in project management and modern technologies can significantly enhance the quality of services provided (ResearchGate, 2008).

Increased Pace of Service Rollout: PPCs enable quicker deployment of infrastructure and services by leveraging private sector capital and expertise. This acceleration is crucial in sectors such as technology and infrastructure, where timely updates can significantly impact public welfare and economic growth. The financial and operational input from the private sector reduces delays often associated with public sector projects (WEF, 2023).

Advanced Technologies: The private sector's role in PPCs often introduces cutting-edge technologies to public projects, which might not otherwise be accessible due to fiscal constraints. This access to advanced technology enhances the effectiveness and efficiency of public services, aligning them with current technological standards (ResearchGate, 2008)

Focus on Outcomes and Client Satisfaction: PPCs

structure contracts with an emphasis on outcomes, which aligns the interests of private entities with public service goals. This focus ensures that projects are not only completed but are also functional and effective in serving the public, enhancing overall client satisfaction. This outcomebased approach typically leads to higher standards of service delivery (WEF, 2023).

Strengthening Domestic Private Sector: By

involving local firms in PPCs, these partnerships help build the capacity and capability of the domestic private sector. This development can lead to job creation and foster a more competitive business environment within the country. Strengthening the domestic private sector through PPCs can stimulate economic growth and innovation (LRV, 2023).

Value for Money (VFM): PPCs are designed to provide value for money, optimizing the balance between the quality of services and their cost. By integrating the expertise and efficiencies of the private sector, PPCs aim to deliver higher quality services at lower costs compared to traditional public procurement methods. This balance is crucial for ensuring that public funds are used effectively (IMF, 2009).

Efficiency in Operations: Private sector participation in PPCs often introduces more efficient operational practices to public services. Specialization and experience in managing complex projects allow private companies to implement these services more efficiently, reducing waste and improving service delivery timelines (World Bank, 2023).

Economic Diversification: By facilitating infrastructure projects, PPCs help diversify the economy away from traditional public sector investments. This diversification stimulates growth in various sectors, enhancing the resilience and competitive edge of the economy. Infrastructure improvements through PPCs can attract foreign investment and boost other sectors such as tourism and commerce (World Bank, 2023).

Case Study - France

Public-private collaborations and partnerships in France have been pivotal in the country's infrastructure development, with a focus on innovative and efficient project delivery.

France has been a leader in PPCs, particularly in long-term concession agreements for infrastructure projects. These agreements involve private companies financing, building, running, and maintaining public networks in exchange for collecting user fees, commonly seen in transport, water, and sanitation sectors. The concession model transfers financial risks to the private sector, while ensuring quality network development. France's PPC model, particularly its concession agreements, has influenced PPC practices globally, demonstrating the country's leading role in this area.

PPC units and related institutional frameworks play a critical role in the implementation and management of PPC projects in France. Several agencies were created to assist and oversee PPC projects across various sectors.

The organization and management of PPPs in France involve complex governance structures and regulatory frameworks, ensuring efficiency and accountability. The legal framework for PPCs in France was modernized in 2019 with the new PPC Code, consolidating various legal texts to provide a clearer structure for these partnerships.

FIN INFRA - Mission d'appui au financement des infrastructures (Advisory Department for **Infrastructure Financing)**

Fin Infra is an advisory department dedicated to public investment projects led by national and local authorities.

Fin Infra helps public entities to optimise the legal and financial structuring of their investments, particularly when they choose to use a global contract (design, construction, upgrade, maintenance, operation), and/ or when they call on external financing (bank debt, equity). It provides public authorities with upstream expertise, guidance documentation as well as risk assessment. Fin Ifra has a a 15-year track record supporting public investment projects: including social infrastructure, transportation, energy grids, and energy production facilities.

Fin Infra services are free of charge to any public project sponsor.

The public procurement tools concerned are, in particular: the concession, the partnership contract, the global public performance contract.

Fin Infra advises all types of public entities: the State, local authorities and associated public institutions. It is also an interlocutor for all stakeholders, private and public, acting in the field of public infrastructure and its financing.

Institutional Framework: Fin Infra is established under the Ministry of Economics, Finance and Industrial and Digital Sovereignty and its activity is defined by Decree No. 2016-522 of 27 April 2016 pursuant to Article 67 of the Ordinance of 23 July 2015.

Fin Infra Service Offer: Fin Infra provides advisory services to foreign governments and public authorities concerning the legal framework and financial instruments best suited for successful PPC and concession contracts

Training

- Best practice-sharing workshops
- Conference guest speakers

PROJECT STRUCTURING

KNOWLEDGE SHARING

- Upstream study of contractual models
- Financial modelling and risk-sharing analysis
- Project robustness and bankability analysis
- Compliance with state aid regulations

TENDER PROCESS

- Best practices: procedural specifications and risk allocation optimization
- Critical review of project legal and financial structuration
- **Project Management Consulting Support**

OPERATION PHASE

- Assistance in contract amendment negotiation and litigation
- Project refinancing: opportunity study, legal and financial assistance

INTERNATIONAL COOPERATION

- Develops bilateral cooperation with partner countries
- Contributes to elaborate and disseminate international doctrine on infrastructure financing.
- Promotes the major achievements of the international community in the field of infrastructure and supports key initiatives at international level

Key takeaways – France

- The French economy benefits significantly from public-private collaborations and partnership projects, with activities worth around €110 billion each year across various sectors including transport, health, education, and more.
- The historical context of PPCs in France, dating back to the 16th century, underscores the country's long-standing tradition of utilizing public-private collaboration to foster infrastructure development.
- France's experience with PPPs has highlighted the importance of developing PPC capabilities at the subnational level, with case studies from cities like Caen and Paris providing insights into the challenges and solutions in implementing PPC projects.
- The establishment of **dedicated PPC laws** and PPC units in France, as seen in other successful PPC models worldwide, is crucial for encouraging sustainable PPC programs and ensuring the effective participation of the private sector in public infrastructure.

Best Examples – France

Based on the most recent information, research, studies, and news, some of the best practice examples of private-public partnerships (PPP) in France are as follows:

- Transport Sector PPPs: France has implemented PPPs across various economic sectors, with transport being one of the most significant. These partnerships have contributed to the development of infrastructure such as roads, railways including high-speed railways, bridges, ports and public transport systems, enhancing connectivity and economic growth.
- Health Sector PPPs: The health sector in France has also seen the successful implementation of PPPs, which have facilitated the construction and management of hospitals and healthcare facilities, ensuring the delivery of services on time and within budget.
- **Education and Urban Equipment:** PPPs have been used for the development of educational institutions and urban equipment, providing modern facilities and services that meet the needs of the population.
- Energy Efficiency and Telecommunications **Projects:** Projects focusing on energy efficiency and telecommunications have also been implemented through PPPs in France, showcasing the model's versatility in addressing a wide range of public service requirements.
- Rural Broadband Initiative: A major initiative using PPP concessions was launched to expand high-speed internet access in rural areas.

Public Lighting and Stadiums: Local projects often involve PPPs for public lighting systems, while both concessions and partnership contracts have been utilized for the development of stadiums and other sports/ tourism infrastructure, demonstrating PPPs' contribution to community development and recreation.

These examples highlight the significant role of PPCs in France, contributing to the development and modernization of public infrastructure across various sectors. The PPC model has facilitated the efficient delivery of projects, combining public oversight with private sector expertise and resources. The continued evolution of PPCs in France indicates an ongoing commitment to leveraging private-public collaboration for infrastructural and public service development.

Case Study – Germany

In Germany, Public-Private Collaborations and Partnerships are pioneering the future of infrastructure and public services, showcasing a dynamic blend of collaboration between government and private sectors. With no single law overseeing PPCs, Germany relies on a complex array of federal and state regulations, highlighted by the PPP Acceleration Act, to streamline these cooperative ventures. The Federal PPP Task Force stands out as a key facilitator, offering essential support and guidance to ensure projects transition smoothly from conception to completion.

These projects span a diverse array of sectors, including significant infrastructure undertakings like motorway expansions, and extend to essential public amenities such as schools and hospitals. Germany adopts various contract models for **PPCs**, such as the Erwerbermodell, Inhabermodell, and Leasingmodell, allowing for flexible project structures and management. This flexibility extends to the meticulous organization and management of projects, with a strong emphasis on financial and economic viability through comprehensive costbenefit analyses and financial modelling.

PD – Berater der öffentlichen Hand

PD – Berater der öffentlichen Hand (pd-g.de) is a dedicated inhouse consultancy firm organized as a limited liability company wholly owned by the public sector. PD is focused on providing extensive advisory services tailored to the public sector, including government bodies at various levels. Their expertise spans a wide range of areas such as administrative modernization, construction projects, IT initiatives, and service-related ventures. With a track record of successful partnerships with government clients, the consultancy firm positions itself as a valuable resource for public institutions seeking specialized guidance and support in diverse areas of public service management and development.

The Public Department (PD) specializes in **strategic** administrative modernization services. They address vital requirements stipulated in the E-Government Act and the government program "Digital Administration 2020," guiding federal agencies towards digitizing their file management and optimizing administrative processes.

Specific focal points within their service portfolio include E-Government, Open Government, governmental information and knowledge management, business process realignment, and business model development. Notably, PD takes on the management of large-scale projects for public clients through the planning, construction, and commissioning phases for various government entities. Services provided include financial and economic consulting, preparation of tender documents, negotiation with bidders, and conducting final cost-benefit analyses. Emphasis is placed on ensuring cost-effectiveness in line with budgetary regulations. The PD supports public clients in strategically planning their projects as investive initiatives, considering their sustainability by evaluating economic, ecological, and social aspects. This approach aims to enhance efficiency, facilitate innovation, and enable

Furthermore, **PD** conducts studies and provides guidance. The "PD-Impulse" series of studies by PD serves as a catalyst for shaping the future of public administration. Through this series of studies, they aim to stimulate discussions about the future of governance and the public sector. Periodically, they release volumes focusing on key themes within administration. Starting from August 2021, PD has emphasized knowledge transfer through the "PD-Perspektiven" series, showcasing best practices from their consulting work for public clients and stakeholders.

administrations to fulfil their duties effectively

despite demographic shifts or budget constraints.

The "PD Perspectives Series" highlights insights into modern administrative work. It focuses on

transferring best practices from consulting work for public clients and stakeholders. This series complements the established "PD Impulse" series, which covers **key themes in administration**. The "PD Perspectives" series delves into topics shaping administrative practices. Some featured works include discussions on enhancing the economic and proactive role of public administration. leveraging regional data spaces for greater impact, sustainability evaluations in construction projects, optimizing tailored funding programs for municipalities, enhancing cybersecurity through state-level collaborations, and key success factors for user-centric online government services. This diverse range of publications aims to stimulate discussions on the future of public administration and features practical examples and themes relevant to the sector.

PPC Models

Germany has been a proponent of PPCs, leveraging them to enhance the efficiency of public service delivery and infrastructure development. Among the models adopted, the Erwerbermodell, Inhabermodell, and Leasingmodell are noteworthy. Each model represents a unique approach to structuring the partnership between public entities and private investors, catering to different project needs and objectives.

Erwerbermodell (Acquisition Model)

The Erwerbermodell is a PPC model where the private partner constructs or refurbishes a public facility (like a school, hospital, or administrative building) and then sells it to the public sector upon completion. The public sector acquires ownership immediately after the purchase, while the private partner may be responsible for the operation and maintenance of the facility for a defined period under a separate service contract. This model is characterized by its straightforward approach to transferring ownership to the public sector while still benefiting from the efficiency and expertise of private sector execution during the construction phase.

Inhabermodell (Owner Model)

The Inhabermodell, or Owner Model, represents a more integrated approach to PPCs, where the private partner is responsible for the planning, financing, construction, and operation of a public facility. Unlike the Erwerbermodell, the public sector does not acquire ownership immediately after the construction. Instead, the private entity retains ownership for an extended period (typically several decades) and operates the facility, providing the public service under a long-term contractual agreement. The public partner pays the private partner for the availability and performance of the service. This model allows for the sharing of operational risks and rewards between the public and private sectors, with a strong focus on longterm performance and service quality.

Leasing Model)

The Leasingmodell introduces a lease arrangement into the PPC framework. In this model, the private partner designs, finances, and constructs the facility and then leases it back to the public sector for a fixed period. The public sector makes regular lease payments to the private partner, which cover the investment and operational costs. At the end of the lease term, the public sector may have the option to acquire ownership of the facility. This model is particularly useful for public entities that wish to benefit from new or improved facilities without the immediate capital expenditure, while the private partner benefits from stable, long-term returns on investment.

The choice among the Erwerbermodell, Inhabermodell, and Leasingmodell depends on several factors, including the project's specific requirements, financial considerations, risk allocation preferences, and the desired level of control over the asset. Each model offers different advantages and is suited to different types of projects and public sector goals. By leveraging these PPC models, Germany continues to innovate in public service delivery and infrastructure development, harnessing the strengths of both the private and public sectors.

Roles of Public and Private Sectors

In Germany, Public-Private Collaborations and Partnerships (PPCs) are implemented as a collaborative venture between the public and private sectors, designed to finance, build, and operate infrastructure projects and services traditionally provided by the public sector. This framework leverages the efficiency and innovation of the private sector while aiming to retain the public sector's control over essential services.

The **public sector** in Germany plays a critical role in PPCs, initiating projects based on public need and policy objectives as well as with broader objectives of environmental sustainability, social equity, and economic development.

The regulatory environment in Germany is designed to promote transparency, fairness, and competition in the procurement process of PPC projects. German public entities, including federal, state, and local governments, use PPCs for a variety of projects, ranging from transportation infrastructure like roads and bridges to social infrastructure such as schools and hospitals.

On the other side, the private sector's **involvement** in PPCs in Germany brings financial investment, technical expertise, and operational efficiencies. The private sector usually takes on the responsibility for the design, construction, financing, and operation of the PPC project. The exact scope depends on the contract model in use. This approach not only helps in offloading the financial burden from the public sector but also exploits the private sector's capability to deliver projects more efficiently and effectively, often leading to cost savings and innovation in public service delivery.

Effective risk management is a cornerstone of successful PPC projects in Germany. Risks are meticulously identified, analyzed, and allocated between the public and private partners in a manner that aligns with their capacity to manage those risks. For instance, construction risks are often borne by the private sector, given their

expertise in managing such challenges, while demand risks might be shared or retained by the public sector.

Performance monitoring is another critical aspect, ensuring that the PPC project meets the agreed standards and provides value for money over its lifetime. The German PPCP model includes rigorous mechanisms for monitoring and evaluating the performance of private partners, including penalties for non-compliance and incentives for exceeding performance targets.

Stakeholder engagement and transparency are vital to maintaining public trust in PPC projects. In Germany, this involves regular communication with the public and stakeholders about project goals, progress, and outcomes. It also includes ensuring accountability through audit reports, public hearings, and access to information.

Germany's approach to Public-Private Collaborations is characterized by its focus on innovation, particularly in the realms of technology and service delivery. This commitment to innovation is underpinned by a **strong adherence to** environmental and social standards, reflecting the country's broader dedication to sustainability and social responsibility. The PPC model in Germany is seen as a crucial mechanism for enhancing the efficiency and effectiveness of public infrastructure development and service provision.

The landscape of PPCs in Germany, however, is not without its challenges. One of the notable issues is the regional variation in how PPCs are implemented. Given that much of the infrastructure is administered by the federal states (Länder), there can be significant differences in how PPC projects are approached and managed across the country. This variation often extends to the organizational cultures of the public and private entities involved in these partnerships, which can sometimes differ markedly. Such differences necessitate careful management and negotiation to ensure the success of PPC initiatives.

Despite these challenges, Germany has demonstrated a strong commitment to the

advancement of PPCs. This is evidenced by the country's efforts in continuous learning, adaptation of best practices, and the implementation of targeted training programs designed to enhance the skills and knowledge of those involved in PPC projects. These initiatives are crucial for bridging cultural gaps between public and private sector partners and for fostering a collaborative environment that is conducive to the successful implementation of PPCs.

Looking forward, the outlook for PPCs in Germany is quite promising. There are plans to undertake more projects, reflecting a continued belief in the value of PPPs for public infrastructure and service delivery. Additionally, there are initiatives to enhance the legislative framework governing PPCs. These legislative enhancements are aimed at further solidifying the role of PPCs in Germany, ensuring that they continue to serve as a cornerstone of public infrastructure development and service delivery. Such legislative changes are likely to focus on increasing transparency, accountability, and efficiency in PPC projects, addressing some of the challenges that have been encountered in the past.

In conclusion, Germany's PPC landscape is marked by a forward-looking approach that emphasizes innovation, sustainability, and continuous improvement. Despite facing challenges related to regional variations and differing organizational cultures, the country is poised to strengthen its commitment to PPCs through more projects and legislative enhancements. This ongoing commitment to PPCs is indicative of Germany's broader strategy to leverage private sector efficiency and innovation in the pursuit of public good, ensuring that public infrastructure and services meet the high standards expected by its citizens.

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Key takeaways – Germany

Best Practice Examples – Germany

Germany has realized 200 PPC projects with €8.1 billion investment since 2003, achieving savings of 13.7%.

North Rhine-Westphalia leads in PPC projects among German states.

- Transparency in PPC projects is increasing through published contracts.
- Corporate sponsorship in state universities is rising, affecting research areas.
- Germany's FDI screening regime was tightened, affecting PPCs with foreign involvement.
- Fiscal pressure drives PPC activity, with states under financial strain adopting PPCs more actively.
- COVID-19 highlighted the need for resilient PPC frameworks in critical infrastructure.
- PPCs are being extended beyond motorways and developing health sector projects.
- PPP models enable on-time and on-budget delivery of infrastructure projects.

Based on the most recent information, research, studies, and news, the best practice examples of private-public partnerships (PPP) in Germany include:

- The Universitätsklinikum Schleswig-Holstein underwent an extensive renovation under a public-private partnership (PPP) project, valued at 1.7 billion Euros, marking one of Germany's most significant healthcare projects. This PPP facilitated the modernization and construction of new facilities at both the Kiel and Lübeck campuses, employing a model where private sector efficiencies were utilized while keeping the ownership with the public sector. The project demonstrated the PPP model's potential to deliver large-scale infrastructure improvements, enhancing the hospital's capacity to provide high-level medical care.
- SeeCampus Niederlausitz Building: Achieved zero-energy standards through a PPP model, showcasing the potential for sustainable construction practices in public infrastructure projects.
- Federal Ministry of Education and Research Building in Berlin: This project resulted in savings of €28 million, highlighting the costeffectiveness that can be achieved through PPPs in government infrastructure.
- Highway Expansion Projects: Germany has successfully utilized PPPs for several highway projects, improving transportation infrastructure and demonstrating the model's applicability to large-scale projects.
- Structural Genomics Consortium (SGC): Though not a construction project, the SGC is a pre-competitive PPP that involves collaboration with academic institutions and pharmaceutical companies globally, including Germany. It aims to accelerate research in human biology and drug discovery, with all research outputs made publicly accessible.

Innovative Medicines Initiative (IMI): A partnership between the European Union and the European pharmaceutical industry, IMI has strengthened European public health and competitiveness in life sciences. While it faces challenges in attributing outcomes to specific initiatives, the IMI is a testament to the impact PPPs can have on research and development.

Best Practice in Selected European Countries: France, Germany, United Kingo

These examples underscore the versatility of PPP models in Germany, from infrastructure and education to healthcare and research, demonstrating the effectiveness of combining public goals with private sector efficiency and innovation.



Case Study – United Kingdom

In the UK, Public-Private Collaborations and Partnerships have transformed public infrastructure development since the introduction of the Private Finance Initiative (PFI) in the early 1990s. This model was crafted to draw private investment into public sector projects, underpinned by a robust policy and legislative framework emphasizing project appraisal, value for money (VfM), and risk management. Within this broader category of PPCs, two specific models have been developed: the Private Finance Initiative (PFI), its successor, PF2 and more recenty the Mutual Investment Model

PFI: Introduced in the early 1990s, PFI is a form of public-private partnership that involves private sector investment in public sector projects. Under PFI, the private sector designs, builds, finances, and operates public facilities and services. In return, the public sector commits to pay the private sector entity a series of payments over the life of the contract, typically spanning 25-30 years. The aim is to leverage private sector management skills and financial efficiency to deliver public services.

PF2: Announced in 2012 as a reform of the PFI model, PF2 sought to address criticisms and improve the transparency and value for money of PFI contracts. PF2 introduced changes such as more transparent financial models, a public sector equity stake in projects to align the interests of public and private sectors more closely, and enhanced risk sharing between the two parties. However, the use of PF2 was limited, and in 2018, the UK government announced it would no longer use PF2 for future projects, moving away from the model due to concerns over cost and value for money.

MIM: Devised by the Welsh Government in 2017, the 'Mutual Investment Model' (MIM) offers an innovative way to attract significant private investment in public infrastructure. MIM sees private partners build and maintain public assets over a long-term period of 25-35 years, with the Welsh

Government making an annual service payment to cover the cost of construction, maintenance and financing of the project. At the end of the contract the asset is transferred into public ownership. MIM offers a fast, proven route to delivery thanks to a more streamlined approach allowing investors and public bodies to move much more quickly from 'money in the bank' to 'shovels in the ground'.

MIM leverages the positive aspects of past PFI initiatives and enhances it through additional focus on social value and enhanced transparency through the Welsh Governments role as a shareholder. Along with the delivery of new infrastructure, MIM also builds in stretching targets for private investors to deliver community benefits and social value, including local job creation, training and apprenticeships, and community initiatives, with financial penalties for non-delivery. MIM removes many of the flaws from historical partnership models that weren't in the public interest. Instead, MIM is built around:

- Fairness: the public sector invest capital in each scheme, ensuring joint decision making and a share in any 'returns on investment';
- Flexibility: contractors and suppliers can be changed to ensure value for money at every stage, and where the provision of 'soft services' like cleaning and catering are excluded from the MIM contract, avoiding expensive and inflexible arrangements for those services;
- Transparency: the public sector and private partners share all financial and operational detail, and with the Welsh Government publishing annual reports on schemes being delivered under MIM.

MIM has become a recognised and well-respected funding model for critical public infrastructure allowing the Welsh Government to deliver new transportation infrastructure (A465 highway) and new social infrastructure (Velindre Cancer Centre)

and schools/colleges through the Welsh Education Partnership.

The Infrastructure and Projects Authority (IPA) operates at the heart of the UK government,

reporting to both the Cabinet Office and HM Treasury. As a central authority on the government's major projects and infrastructure, the IPA plays a crucial role in supporting, advising, and ensuring the successful delivery of various infrastructure and major government projects across the country. The organization's mandate is broad, encompassing a range of activities aimed at improving the delivery and performance of government projects.

It provides bespoke advice and support on project delivery, commercial and financial aspects, and sector-specific insights. This includes guidance on best practices, risk management, and strategies to optimize project outcomes. This service ensures that departments have access to specialized knowledge and can navigate complex project challenges effectively.

A key service line of the IPA involves offering **independent assurance reviews** for major projects and programs. These reviews are designed to assess the health and viability of projects, identifying risks and issues that might affect their successful timely delivery.

The IPA supports the modernization of the UK's infrastructure through **expert advice** on construction techniques, sustainability, and digital innovation. This includes advocating for the use of modern methods of construction (MMC) and providing guidance on infrastructure finance, including private-public partnerships (PPPs).

Recognizing the importance of skills and expertise in project delivery, the IPA is deeply involved in building capacity and enhancing the capabilities of government professionals involved in project management. This involves the development and dissemination of standards, tools, and guidance as well as training programs like the Major Projects Leadership Academy (MPLA) and the Project Delivery Fast Stream.

The IPA is committed to facilitating the **exchange of** knowledge and best practices across government departments and projects. It leverages lessons learned from project reviews and experiences to inform future project delivery. This includes publishing guidance, frameworks, and toolkits, such as the Government Functional Standard for Project Delivery and the Infrastructure and Projects Authority Annual Report, which offers insights into the portfolio of major government projects.

The IPA also engages in **international work**, offering its expertise and support to other nations while promoting global best practices in project and infrastructure management. This involves collaboration with foreign governments, international organizations, and development banks to share knowledge and foster improvements in project delivery worldwide.

The National Infrastructure Commission (NIC)

carries out in-depth studies into the UK's major infrastructure needs and makes recommendations to the UK government. NIC's work covers all sectors of economic infrastructure defined as: energy, transport, water and wastewater (drainage and sewerage), waste, flood risk management and digital communications. It also considers interactions between its infrastructure recommendations and housing supply. The Commission's role does not cover housing (as a distinct area), social infrastructure, land use or agriculture.

Its objectives are to support sustainable economic growth across all regions of the UK, improve competitiveness, improve quality of life, and support climate resilience and the transition to net zero carbon emissions by 2050. The Commission publishes a National Infrastructure Assessment every five years setting out its assessment of long term infrastructure needs, with recommendations to the government; the second Assessment was published on 18 October 2023.

The UK's experience with PPCs is marked by ongoing learning from both successes and challenges, with a forward-looking approach to adapting to new technologies, environmental

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sustainability, and ensuring equitable public service access. This evolving landscape underscores the UK's commitment to leveraging PPPs for comprehensive public infrastructure development and service delivery.

There are several **new innovative PPC type** structures being developed in the UK focused on water, transmission and energy projects. These include the **Direct Procurement for** Customers (DPC) which involves the competitive tendering of large scale water utility projects. DPC will result in water companies competitively procuring more aspects of an infrastructure project, including financing. By outsourcing the delivery of infrastructure projects using DPC, water companies can achieve significant benefits for customers both through innovation and lower whole life costs of the project.

The CATO (Competitively Appointed

Transmission Operator) regime (also known as 'Early Competition') presents another innovative model that is due to come into effect next year with the first large scale transmission projects. Early competition is a competitive process to select a bidder a solution or a specific need on UK's electricity transmission system. The process begins "early", prior to the detailed design, surveying and consenting phases of solution development. This means organisations could compete for the design, build and ownership of onshore transmission solutions. Early competition will help encourage new ways of working and aims to seek the best solutions at a fair cost for consumers.

Key Takeaways – United Kingdom

- PPCs help address public finance constraints, enabling critical infrastructure development without immediate large-scale public expenditure.
- . PPCs in the UK have delivered over £56 billion of private investment in 700 infrastructure projects, including schools and hospitals.
- They facilitate housing and regeneration projects, addressing urban development needs through private investment and expertise.
- PPCs support climate change initiatives, such as district heating networks, by leveraging private sector innovation and funding.
- A joint venture in Waltham Forest demonstrates how PPCs can quickly provide homes for temporary accommodation, addressing immediate housing crises.
- They transfer risk to the private sector, ensuring cost, delivery, and performance efficiencies that protect public interests.
- The UK's PFI Centre of Excellence aids in managing the risks and operational performance of current PFI contracts, enhancing accountability and effectiveness.
- Healthcare PFIs have sought to innovate and manage risks in public health infrastructure and service delivery, reflecting a broader European trend.
- The Association of Infrastructure Investors in PPPs (AIIP) aims to improve standards and practices in the UK's PPC industry, promoting collaboration and innovation.
- PPCs are recognized for their role in promoting innovation and achieving value for money in government projects.

- Successful projects depend on a robust policy and regulatory framework, as well as a pipeline of bankable projects, as shown by international experiences including the UK.
- Dedicated PPC unit in UK supports the development and execution of PPC programs, contributing to long-term success.
- PFI, PF2 and MIM projects have enabled the design, build, finance, and operation of infrastructure, transferring risks to enhance public asset management.
- PPCs have supported large infrastructure projects in the UK since the 1990s, providing a mechanism for upfront private financing for public benefits.
- Despite challenges, PPCs remain vital for infrastructure financing under public spending constraints, demonstrating their ongoing relevance.

Best Practice Examples – United Kingdom

Based on the most recent information, research, studies, and news, the best practice examples of private-public partnerships (PPP) in the United Kingdom, include:

- UK Hospital PPPs: Between 1997 and 2010, England signed 102 health sector PPP contracts (also known as Private Finance Initiative or PFI contracts) compared to 35 publicly funded health capital investment projects. This extensive use of PPPs in the health sector underscores their role in delivering critical infrastructure.
- London Underground PPP: Initially criticized for its high costs and profits for private partners, this PPP was eventually taken over by London's public transport company. The early criticism followed by public sector acquisition illustrates the complex dynamics and potential adjustments in PPP arrangements.
- PFI Centre of Excellence: This initiative manages around 580 active PFI contracts across various sectors, including schools, hospitals, roads, housing, and military facilities, indicating the breadth of PPP application in the UK.
- **Westminster City Council Housing PPP:** A joint venture between Westminster City Council and a developer to deliver housing in London, representing PPPs in the urban development and housing sector.
- Wirral Growth Company: A 50:50 joint venture between Wirral Metropolitan Borough Council and a developer to regenerate Birkenhead town centre, demonstrating PPPs in town centre renewal and regeneration.

These examples illustrate the diverse applications of PPCs in the UK, from health and transportation to energy, housing, and urban regeneration. They also illustrate the beneficial outcomes and lessons learned from PPCs in the UK, including the importance of effective procurement and project management, the potential need for public sector intervention, and the critical factors underpinning successful PPC projects.

Best Practice Case Study – WEPCo

Introduction to the MIM Programme

The Mutual Investment Model (MIM) is an innovative financing regime launched by the Welsh Government in 2017. It aims to leverage private financing for infrastructure projects in transport, health, and education sectors while ensuring these projects remain off the government's balance sheet. The MIM model builds on lessons learned from previous investment models like the Scottish NPD model, focusing on transparency and public sector involvement to finance necessary infrastructure without impacting public sector finances.

WEPCo: Development and Purpose

Welsh Education Partnership Co (WEPCo) was established in August 2020 as a joint venture between the Development Bank of Wales (20%) and Meridiam (80%). WEPCo's primary purpose is to facilitate the delivery of educational facilities across Wales under the MIM model, with a total estimated capital value of over £500 million. The partnership aims to deliver projects that provide additional benefits to local communities, including economic, social, environmental, and cultural improvements.

Key Projects:

WEPCo is involved in several key development projects, including:

- Mynydd Isa Campus in Flintshire
- RCT Primary Cluster in Rhondda Cynon Taf
- Cardiff and Vale College Batch 2 in Cardiff
- Bridgend Primary Cluster in Bridgend

Project Development Process

The development process involves several stages:

Stage 1: Collaboration with local authorities and

institutions to develop concept designs and submit planning documentation.

Stage 2: Detailed design, tendering for contractors, and financial planning to ensure the project's feasibility.

Financial Close: Securing financing, signing agreements, and starting construction.

Contractual Structure

The contractual structure involves multiple stakeholders, including WEPCo shareholders, local authorities, and project companies responsible for building and operating the projects over a 25year period. The structure ensures transparency and accountability through agreements like the Strategic Partnering Agreement and MIM Project Agreement.

Sustainability and Community Focus

WEPCo prioritizes sustainability and community benefits by employing local SMEs, emphasizing environmental performance, and integrating design approaches that promote inclusive and resilient infrastructure. Initiatives include upskilling local workforces, delivering health and wellbeing programs, and fostering cultural activities that showcase Welsh heritage.

WEPCo exemplifies a strategic and transparent approach to delivering educational infrastructure in Wales through the MIM model, ensuring long-term value and community benefits while adhering to rigorous development and sustainability standards.

Case Study – EPEC: The European PPP Expertise Centre

The European PPP Expertise Centre (EPEC) plays a crucial role in shaping the landscape of Public-Private Partnerships (PPPs)¹ across Europe.

EPEC is a division of the European Investment Bank (EIB) that focuses on strengthening the capacity of public sector members in PPP transactions. It serves as a central platform for sharing good practices, developing guidance tools, and assisting in PPP policy development. It comprises 42 member organizations, including the EIB and the European Commission. Its members are typically public authorities responsible for PPP policy or programs in EU member states, candidate countries, and other eligible nations.

EPEC addresses practical issues in implementing PPPs by bringing together the collective expertise of its members. This approach helps in navigating the complexities often associated with PPP projects. EPEC plays a vital role in sharing PPP market intelligence. This information exchange is crucial for members to understand current trends and best practices in the PPP landscape. The development of PPP guidance and tools is another key function of EPEC. These resources are essential for members to effectively plan, approve, and manage PPP projects.

EPEC supports policymakers in developing PPP legal and regulatory frameworks, institutional arrangements, and preparation processes. Such support is critical for creating a conducive environment for PPPs. It helps public authorities in the preparation and procurement of PPPs through strategic advice and support tailored to individual projects. This assistance is crucial in the early stages of project development.

EPEC acknowledges potential issues such as the "affordability illusion" that can negatively impact

fiscal sustainability if PPP liabilities are not properly managed. This awareness is vital in ensuring responsible PPP development. EPEC has focused on combining EU grant funding with private sector financing through PPP structures. This approach is appealing to many member states, particularly in their current fiscal positions.

EPEC has taken stock of projects that successfully combined PPP structures with EU funds. This stocktake provides valuable insights and guidance on the matter. The analysis of various PPP projects, including the assessment of their planning, implementation, and expected benefits, forms an integral part of EPEC's work. Such analyses help in deriving valuable lessons for future projects. EPEC's case studies often highlight the issue of imbalanced risk allocation in PPP projects. Addressing these issues is essential for the fair and effective execution of PPPs.

EPEC emphasizes the importance of comparative studies for procurement options in PPPs. Such studies help in ensuring that the most effective procurement method is chosen for each project. EPEC fosters a community of practice among its members, facilitating a network where experiences and knowledge are shared. This network is vital for building a cohesive PPP community across Europe.

EPEC recognizes the challenges in PPPs, including complex contractual arrangements, long-term commitments, and the need for balanced risksharing between public and private entities. EPEC engages in training and capacity-building activities, enhancing the skills of public sector officials in dealing with PPPs. This training is crucial for the effective management and implementation of PPP projects.

EPEC's work influences the broader EU policies

on PPPs. Its recommendations and findings often feed into the policy-making process at the EU level, affecting how PPPs are approached across member states. EPEC encourages innovation in PPPs, exploring new models and approaches that could enhance project efficiency and outcomes.

EPEC's future endeavors focus on enhancing the resilience and sustainability of PPP projects, particularly in the wake of changing economic and environmental landscapes. Ultimately, EPEC contributes significantly to the growth and development of European infrastructure through effective and sustainable PPPs, playing a pivotal role in the region's economic advancement.

¹ In this sense, the term Public-Private Partnerships (PPPs) covers a wide range of different models of PPP contracts and investment structures, not only the traditional model of PPPs

Recommendations with Regards to Management of PPCs

The establishment of a dedicated agency for managing cross-sectoral Public-Private Partnerships and similar collaborations in Czech Republic is a strategic move that can significantly enhance the efficiency, effectiveness, and overall success of projects. Below is a detailed analysis outlining the reasons for this recommendation:

Expertise Consolidation: A dedicated PPC agency can centralize expertise, providing a pool of specialists knowledgeable in finance, law, and project management, crucial for the complex nature of PPCs.

Streamlined Processes: Such an agency can streamline PPC processes, ensuring consistency in project evaluation, bidding, and implementation. This uniformity is key for investor confidence and project success.

Risk Management: PPCs involve substantial risks. A dedicated agency would be better positioned to assess, manage, and mitigate these risks, a crucial aspect for the long-term sustainability of PPC projects.

Legal and Regulatory Framework: The agency can also guide the development and enforcement of a robust legal and regulatory framework for PPCs, ensuring compliance with both national and EU regulations.

Facilitating Government Commitment:

Establishing a PPC agency would demonstrate the government's commitment to PPCs, thereby attracting more private investment and enhancing the credibility of these projects.

Capacity Building: Such an agency can play a vital role in capacity building, not only within the agency but also among other stakeholders involved in PPCs, including local authorities and private sector entities.

Improved Financial Management: An agency focused on PPCs would be better equipped to manage the financial aspects, including budgeting,

funding, and ensuring financial sustainability of the projects.

Enhanced Accountability and Transparency:

A dedicated PPC agency can enforce higher standards of accountability and transparency, critical in maintaining public trust and ensuring the integrity of PPC projects.

Policy Development and Advocacy: The agency can also play a significant role in policy development, advocating for reforms and changes that support the growth and effectiveness of PPCs.

International Collaboration and Learning: An agency can facilitate international collaboration, allowing Czech Republic to learn from global best practices and integrate these insights into its PPC framework.

Project Selection and Prioritization: A dedicated agency can help in the objective selection and prioritization of PPC projects, ensuring that projects align with national development goals and deliver maximum public benefit.

Dealing with Complexity: PPC projects are inherently complex, and an agency with specialized knowledge can better navigate this complexity, ensuring projects are feasible and viable.

Long-term Sustainability: A dedicated agency would have the perspective needed to ensure the long-term sustainability of PPC projects including resilience of the project infrastructure; a critical factor given the long duration of many PPC agreements.

Crisis Management and Flexibility: Such an agency can offer rapid response and flexibility in crisis situations, adapting PPP contracts and terms to changing circumstances, which is vital in a dynamic economic environment.

Stakeholder Engagement: Effective stakeholder engagement is crucial for the success of PPCs. A dedicated agency can facilitate this engagement, ensuring that all voices are heard and considered in the PPP process.

Monitoring and Evaluation: Continuous monitoring and evaluation of PPC projects are essential for ensuring their effectiveness. An agency focused on PPCs can effectively carry out these activities.

Fostering Innovation: A dedicated agency can encourage innovation in PPC projects, exploring new models and approaches that could enhance efficiency and outcomes.

Economic Growth and Development: By ensuring the successful implementation of PPC projects, the agency can contribute significantly to Czech Republic's economic growth and development.

Promoting Social Equity: The agency can ensure that PPC projects contribute to social equity, including addressing environmental concerns and community needs.

Developing Infrastructure: A dedicated agency can focus on developing infrastructure that is crucial for Czech Republic's long-term development, aligning PPP projects with these goals.

Resources

PD - Inhouse-Beratung der öffentlichen Hand: https://www.pd-g.de/

Infrastructure and Project Authority (IPA): https://www.gov.uk/government/organisations/ infrastructure-and-projects-authority/about

Ten years of PPP in Germany: experiences and perspectives: https://www.icevirtuallibrary.com/ doi/10.1680/mpal.13.00052

Public-Private Partnerships: Driving Growth, Building Resilience: https://www.local.gov.uk/ publications/public-private-partnerships-drivinggrowth-building-resilience

PFI Centre of Excellence: https://www.gov. uk/government/collections/public-privatepartnerships

Efficiency and Effectiveness: PPP as a Potential Source of Higher Efficiency for Infrastructure Projects: https://ppp-certification.com/ ppp-certification-guide/52-efficiency-andeffectiveness-ppp-potential-source-higherefficiency

Public-private partnerships for infrastructure at the subnational level of government: Opportunities and challenges in France: https:// www.oecd-ilibrary.org/sites/9789264304864-4-en/index.html?itemId=/content/ component/9789264304864-4-en

France Chapter in The Public-Private Partnership Law Review - edition 9: https://www.whitecase. com/insight-our-thinking/france-chapter-publicprivate-partnership-law-review-edition-9

Special Report: Public Private Partnerships in the EU: https://op.europa.eu/webpub/eca/specialreports/ppp-9-2018/en/

How Can Public-Private Partnerships (PPPs) be Successful: https://www.worldbank.org/en/region/ mena/brief/how-can-public-private-partnershipsppps-be-successful

Public Private Partnerships In Germany - An Overview: https://www.mondaq.com/germany/ government-contracts-procurement--ppp/87762/ public-private-partnerships-in-germany---anoverview

The rising advantage of public-private partnerships: https://www.mckinsey.com/industries/privateequity-and-principal-investors/our-insights/therising-advantage-of-public-private-partnerships#/

Investing in 2024, Trends and Developments, Germany: https://practiceguides.chambers.com/ practice-guides/investing-in-2024/germany/ trends-and-developments/O15611

Private Participation in Infrastructure (PPI) Database: https://ppp.worldbank.org/publicprivate-partnership/library/private-participationinfrastructure-ppi-database

Review of studies on the public-private partnerships (PPP) for infrastructure projects: https://www.sciencedirect.com/science/article/ abs/pii/S0263786317308372

European PPP Expertise Centre: https://www.eib.org/epec/

EPEC Data Portal: https://data.eib.org/epec/

Bundesverband Public Private Partnership: https://www.bppp.de/

PPP Projektdatenbank: https://www.pppprojektdatenbank.de/index.php?id=9

World Bank, PUBLIC-PRIVATE PARTNERSHIPS. Reference Guide, Version 3: https://ppp. worldbank.org/public-private-partnership/sites/ ppp.worldbank.org/files/documents/PPP%20 Reference%20Guide%20Version%203.pdf

Reflections on the Future of Pharmaceutical Public-Private Partnerships: From Input to Impact: https:// www.ncbi.nlm.nih.gov/pmc/articles/PMC5579142/

Critical success factors for PPP/PFI projects in the UK construction industry: https://www. researchgate.net/publication/24077826_Critical_ success_factors_for_PPPFI_projects_in_the_ UK_construction_industry

Everyone has an opinion but who knows exactly what a PPP is? https://www.vinci.com/vinci.nsf/en/ item/ppp-01.htm

ENISA, Public Private Partnerships (PPP), Cooperative models: https://www.enisa.europa. eu/publications/public-private-partnerships-pppcooperative-models/@@download/fullReport

What forces will shape European private equity in 2024?: https://www.nortonrosefulbright. com/en-de/knowledge/publications/836f73f9/ what-forces-will-shape-european-private-equityin-2024

Chambers Student, Infrastructure PPP: https://www. chambersstudent.co.uk/legal-practice-areas/ infrastructure-ppp

Can public-private partnerships (PPPs) bridge the infrastructure gap in fast-growing cities? https:// www.theigc.org/blogs/can-public-privatepartnerships-ppps-bridge-infrastructure-gap-fastgrowing-cities

The Effect of Public-Private Partnerships on Innovation in Infrastructure Delivery: https://journals.sagepub.com/doi/ full/10.1177/87569728231189989

Are public-private partnerships a healthy option? A systematic literature review: https:// www.sciencedirect.com/science/article/pii/ S0277953614002871

Public-Private Partnerships: Driving Growth, Building Resilience: https://www.local.gov.uk/ publications/public-private-partnerships-drivinggrowth-building-resilience

PPP Positives: Examples of Good Practice: https:// www.partnershipsbulletin.com/article/1822936/ ppp-positives-examples-good-practice

UK insurers urge public-private schemes to deploy £100bn green investment: https://www.ft.com/ content/87fc7913-82ce-48f3-b713-db25847adb77

Public Private Partnerships in the United Kingdom: https://www.lexology.com/library/ detail.aspx?g=18fc6332-5ad1-4b5d-b69c-8b47d308bd99

