European Parliament

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT B
STRUCTURAL AND COHESION POLICIES

Agriculture and Rural Development

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Research for REGI Committee - Public Private Partnerships and Cohesion Policy

STUDY

EN

2017

European Parliament

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

Policy Department for Structural and Cohesion Policies

REGIONAL DEVELOPMENT

Research for REGI Committee - Public Private Partnerships and Cohesion Policy

STUDY

This document was requested by the European Parliament's Committee on Regional Development.

AUTHORS

CSIL, Centre for Industrial Studies, Milan: Gianni Carbonaro, Gelsomina Catalano, Laura Delponte, Silvia Vignetti

supported by (case studies) Filippo Addarii and Fiorenza Lipparini (PlusValue), Dariusz Zwierzynski

Research managers: Diána Haase, Filipa Azevedo
Project and publication assistance: Jeanette Bell
Policy Department for Structural and Cohesion Policies, European Parliament

LINGUISTIC VERSIONS

Original: EN

ABOUT THE PUBLISHER

To contact the Policy Department or to subscribe to updates on our work for the REGI Committee please write to: Poldep-cohesion@europarl.europa.eu

Manuscript completed in November 2017

Print	ISBN 978-92-846-2002-9	doi:10.2861/342557	QA-04-17-880-EN-C
PDF	ISBN 978-92-846-2001-2	doi:10.2861/809503	QA-04-17-880-EN-N

This document is available on the internet at:
http://www.europarl.europa.eu/RegData/etudes/STUD/2017/602010/IPOL_STU(2017)602010_EN.pdf

Please use the following reference to cite this study:
Carbonaro, G Catalano, G Delponte, L Vignetti, S supported by (case studies) Addarii, F & Lipparini, F (PlusValue) & Zwierzynski, D 2017, Research for REGI Committee – Public Private Partnerships and Cohesion Policy, European Parliament, Policy Department for Structural and Cohesion Policies, Brussels
Please use the following reference for in-text citations:
Carbonaro, Catalano, Delponte, Vignetti, Addarii, Lipparini & Zwierzynski (2017)

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Abstract

The objective of this study is to describe the role of Public-Private Partnerships (PPPs) in Cohesion Policy. The study finds that the use of PPPs in Cohesion Policy has been limited and concentrated in a number of Member States and sectors, in spite of favourable regulatory changes. Evidence shows that PPPs are useful instruments to implement projects on time and on budget, but the assessment of outcomes over the long-term period is still limited and not conclusive.

IP/B/REGI/IC/2017-044 November 2017

PE 602.010 EN

CONTENTS

LIST OF ABBREVIATIONS

BOT	Build Operate and Transfer
BOOT	Build Operate Own Transfer
CF	Cohesion Fund
CPR	Common Provision Regulation
DBFO	Design, Build, Finance, Operate
DBO	Design, Built, Operate
DBOT	Design, Build, Operate and Transfer
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECA	European Court of Auditors
EFSI	European Fund for Strategic Investments
EIB	European Investment Bank
EIF	European Investment Fund
EPEC	European PPP Expertise Centre
ERDF	European Regional Development Fund
ESA	European System of Accounts
ESF	European Social Fund
ESIF	European Structural and Investment Funds
EP	European Parliament
EU	European Union
FIs	Financial Instruments
GDP	Gross Domestic Product

ICT	Information and Communication Technologies
JASPERS	Joint Assistance to Support Projects in European Regions.
JESSICA	Joint European Support for Sustainable Investment in City Areas
MA	Managing Authority
MS	Member States
OP	Operational Programme
PPP	Public-Private Partnership
PSC	Public Sector Comparator
REGI	Committee on Regional Development of the European Parliament
SMEs	Small and Medium-Sized Enterprises
SPV	Special Purpose Vehicle
TEN-T	Trans-European Transport Network
TO	Thematic Objective
VfM	Value for Money

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EXECUTIVE SUMMARY

Aim

The objective of this study is to describe how Public-Private Partnerships (PPPs) have been used in the context of Cohesion Policy by looking at the reasons for pursuing such an approach, the variety of implementation agreements and the expected outcomes.

Challenges in assessing PPP performances

The definition of PPPs in international practice encompasses a variety of long-term contractual arrangements. According to most definitions, including that used by Eurostat, only projects that bundle construction and operational aspects are considered to be PPPs. There are two drivers behind the PPP approach: the need to cope with limited public resources and the need to close the gap in physical infrastructure. It is expected that PPPs can bring savings in public resources, while improving the quality and efficiency of public spending. However, the superior performance of PPPs can be questioned by examples of poor outcomes, unbalanced risk allocation between public and private partners, and the opportunistic use of PPPs as a way to circumvent public debt constraints. Fiscal incentives can bias the value for money (VfM) assessment when public budgets are constrained by debt limits.

The use of PPPs remains controversial, since any judgment of the performance of PPP projects is too dependent upon specific circumstances. Existing literature supports the idea that PPP projects perform better in the construction phase (i.e. they are concluded on time and on budget), but also points to many open issues concerning the real long-term costs of PPPs for the public sector, and ultimately for taxpayers.

PPP markets in Europe

The PPP market had increased steadily until 2007 when it started to decline after the financial and economic crisis, which created liquidity shortages that substantially increased the cost of private finance. The UK has the largest European market. Other large PPP markets emerged in France, Spain, Portugal, Germany and Greece. The transport sector, and in particular road projects, claim the lion's share of the European PPP market. The macroeconomic significance of PPPs remains relatively small. In countries with large infrastructure gaps, such as Greece, Portugal or Spain at the beginning of the 1990s, PPPs were used for financing mega projects. Since the financial crisis, tougher limits and controls on public expenditure have reduced the appetite for mega projects, which are now implemented more sporadically.

PPP in Cohesion Policy

A blended PPP project is a PPP arrangement where part, or all, of public funding is provided for the project by the European Regional Development Fund (ERDF) or the Cohesion Fund (CF). Expectations related to PPP added value are based on a more efficient and effective use of resources and on the need to improve the result orientation of Cohesion Policy.

The development of a systematic EU strategic framework incorporating the PPP approach to public investments of European interest has taken shape since the early 1990's. However, it was only under the 2007-2013 financial perspectives, that the use of PPP to leverage EU funds became a more explicit objective of the Structural Funds regulatory framework. Opportunities for a wider application of PPP in the achievement of Cohesion Policy objectives were provided in the current programming period, when a number of PPP-specific provisions

were introduced by the CPR (Common Provisions Regulations) to remove existing obstacles to the use of PPPs in Cohesion Policy.

Two of the main routes to support PPPs are via operations classified as major projects and via the establishment of Financial Instruments (FIs). Typically, a combination of Cohesion Policy grants and other sources of financing is applied to major projects that generate a revenue. A more extensive use of FIs in Cohesion Policy is likely to generate more blended PPP projects. The choice of the blending mechanism depends on the specific characteristics of the project and integrates several elements, including VfM considerations, the need to achieve a balanced and resilient risk-sharing structure and the need to strike a balance between the different interests and incentives of the multiple stakeholders involved in a PPP.

Implementation of PPPs in Cohesion Policy

Despite a more favourable EU legislative framework in 2014-2020, the number of blended PPP projects indicates that the use of PPP operations in Cohesion Policy remains limited. However, the actual number of PPP blended projects is likely to be underestimated due to the lack of systematic data collection for small and medium-sized blended PPP operations. There is no clear correlation between the level of development of the national PPP market and the use of PPPs in the implementation of Operational Programmes (OPs).

The new provisions included in the CPR bring about improvements in a number of regulatory constraints that generated an excessive risk burden for managing authorities (MAs) and private partners engaged in PPP operations. An important novelty concerns the possibility of using ESI Fund co-financing for availability payments, which are due to the private partner upon termination of construction work. However, many of the difficulties in developing PPP approaches in Cohesion Policy remain and are linked to the complexity of combining the two processes.

Other factors limit the use of PPPs in Cohesion Policy, including the very perception of the advantages of using PPPs in the delivery of services of general interest. MAs often do not have the in-house capacity to design a robust and viable PPP approach, although some learning effects are already evident, especially in countries where the use of blending is more mature. Some forms of standardization of contracts and procedures is possible, especially in small-scale PPPs in specific sectors, but most PPPs are structured in transaction-specific ways.

The evidence on whether a PPP approach can be conducive to higher levels of EU fund absorption is not conclusive. The focus on achieving expenditure targets does not generally work for the PPP approach. The availability of ERDF/CF has sometimes acted as an alternative to the effort to mobilise private funds via a PPP approach, rather than a way to leverage them.

Institutional support for using PPP in Cohesion Policy

With respect to promoting the combination of PPP and Cohesion resources, the EIB (European Investment Bank) has played three key roles: provision of advisory and technical assistance services, direct financial support (e.g. co-financing of Cohesion Policy projects) and indirect support via fund management services (e.g. mandates to manage ERDF-supported holding funds). Since the beginning of the financial crisis, the EIB, together with the EC, has expanded the provision of directly managed financial instruments that can also be used in combination with Cohesion Policy resources. These instruments are generally designed to improve the bankability of PPP projects.

Most Member States (MS) have set up centrally managed PPP units, but MS experience of blended PPP projects remains limited. Thus far, only Greece has managed to integrate the PPP approach more systematically in the delivery of Cohesion Policy objectives. Poland and Croatia have recently undertaken to promote the use of the PPP approach more widely in the delivery of OPs.

Insights from the case studies

The availability of EU contributions was key to achieving the PPP financial close, because it mitigated the operation's risk profile. In some cases, it also helped to improve the projects' design quality or their welfare implications. The case studies show that PPPs are useful instruments to conclude projects on time and on budget, whereas the assessment of project outcomes is mixed, depending on the time period considered and on the parameters used for performing such an assessment.

Recommendations

PPP should be seen as one possible option for pursuing Cohesion Policy objectives, while sound VfM considerations should guide the selection of the most appropriate procurement option. Since approaches to VfM are still fragmented and not well known to stakeholders, it is necessary to develop sound methodologies to perform such analyses. In the specific case of blended PPP projects, VfM should also cover the specific value added of the procurement route for the achievement of the Cohesion Policy objectives. Both the European Parliament (EP) and national authorities should promote a more strategic approach to the development of PPP project pipelines, along with encouraging the development of technical skills and capabilities for performing VfM analyses and managing PPP contracts. The public debate on the advantages of using PPPs in Cohesion Policy should be better informed by data and ex-post performance assessments.

1. INTRODUCTION

1.1. Study background

PPPs are contracting arrangements of different forms and typologies that can be used as an alternative to the traditional public procurement route for the construction, management and operation of a public asset for the provision of a service of public interest. They are increasingly seen as a way to leverage private funds in the delivery of public policies, especially after the financial crisis has put greater pressure on public finance. At the same time, institutional capacity constraints and considerations related to the long-term sustainability and value added of this financing and delivery system for the public sector raise a number of concerns.

The rationale and possibility to combine PPPs with EU financial resources have been discussed and debated by various public and private stakeholders. Despite this rising interest, systematic evidence is lacking and it is generally acknowledged that the use of PPPs in the context of Cohesion Policy is still limited. This depends on a combination of factors, such as regulatory barriers that discourage private sector participation in co-financed projects, lack of capacity in MAs or other considerations more related to political willingness and PPP-related institutional context. The European Commission has been particularly active in recent years in undertaking steps to promote the use of blending (i.e. the combination of PPP procurement and the use of EU budgetary resources) including during the discussion of the relevant Cohesion Policy legislative framework, the improvement of the implementation arrangements as well the provision of technical assistance platforms and instruments linked to project preparation and financing. Several EU institutions, public sector agencies and private sector operators appear to share the expectation that promoting PPPs within the context of Cohesion Policy would enhance the result-orientation and possibly introduce more efficiency in the use of public funds. Against this backdrop, however, a better informed debate on the rationale and opportunity to promote the use of PPPs is still lacking.

The present study feeds into this discussion by providing the Committee on Regional Development of the European Parliament (REGI Committee) with a background document analysing the state of play of the debate about blending PPPs and EU budgetary resources and providing practical examples of the potential and risk of the use of PPP in the post-2020 Cohesion Policy.

1.2. Objectives and research questions

Within the framework of Cohesion Policy, combining resources from the ERDF and CF with private financing resources in a PPP structure is often referred to as 'blending'. A blended project is a PPP arrangement where part, or total, of public funding is provided directly to the project in the form of a grant or other financial instruments from an ERDF/CF Fund. The objective of this study is to describe how PPPs have been used in the context of Cohesion Policy in combination with ERDF and CF, reflecting on the strategic framework underpinning their use and drawing from evidence on implementation. The study's Terms of Reference identify the following areas for enquiry:

- the rationale for using PPP in Cohesion Policy,
- the expected impact of implementation of the 2014-2020 provisions related to PPPs,
- the role of different stakeholders in blended projects, and
- examples from implementation experiences.

Each of the above themes has been broken down by the authors into more specific research questions, which have guided the preparation of this study.

The rationale for using PPP in Cohesion Policy.

- What has been the rationale of ERDF and CF support to PPPs? How has this rationale changed over the years? Which have been the major milestones in developing a strategic and regulatory framework conducive to the use of PPPs?
- What are the expected advantages and risks? Is there any relationship between the contractual forms of PPPs, fund absorption and the success of PPPs?
- What is the available evidence in relation to the use of PPP contracts in Cohesion Policy?
- Which sectors/typologies of operations lend themselves particularly well for PPP schemes?

The expected impact of implementation of the 2014-2020 provisions related to PPPs.

- In which way it is possible to deliver ERDF and CF through PPP? Which are the key principles of using PPP in ERDF and CF funded projects? What are the similarities and differences between ERDF/CF and PPP processes?
- Which regulatory changes have been introduced to facilitate the uptake of blended projects? What are the obstacles addressed by the 2014-2020 provisions in relation to PPPs?
- Which criteria should a project meet in order to be eligible for combining a PPP option with ERDF and CF?
- Which implementation modalities are possible? Which are the respective advantages/disadvantages of combining grant support and financial instruments support in PPP operations?
- Which are the specific aspects concerning revenue generating projects and major projects?
- What are the expectations of the different stakeholders with respect to the impact of CPR for 2014-2020?

The role of different stakeholders in blended projects.

- What has been the role of the EC and of the EIB Group in supporting PPP projects?
- What has been the role of national PPP units in MS?
- What has been the involvement of local level stakeholders in PPPs?

Examples from implementation experiences.

- What are the expected advantages and outcomes? To what extent the use of PPP facilitate/hamper EU fund disbursement rates?
- How the design of blended projects works? What are the most cumbersome steps?
- How are achievements measured?
- What are the key success and failure factors?

- Are there examples of PPP structures that were initially considered and later abandoned? What were the reasons and what were the alternatives found?

1.3. Research strategy and methodology

The use of the PPP model in Cohesion Policy is controversial and its ultimate long-term performance is difficult to demonstrate, also because of a lack of systematic and conclusive evidence. To tackle this challenge, the research strategy took a broad perspective and built on a combination of methodological tools that aimed to achieve a balanced and well-documented judgement on the role of PPPs in Cohesion Policy. In particular, a critical review of the advantages and disadvantages of the PPP approach has been built by taking into consideration the different perspectives of public and private actors and, within the public system, of all the relevant stakeholders of the Cohesion Policy shared management system. The research strategy also took stock of the wider international debate on the use of PPPs in public policy delivery, drawing on existing evidence from assessment and evaluation studies. The study approach was built on a combination of documentary analysis, in-depth interviews and case studies which were all consolidated into this final study. As far as possible, the use of examples and documented case histories provides a down-on-earth reflection on the distance between overarching ambitions and actual implementation challenges.

Desk review. The documentary analysis performed a systematic review of the available academic, regulatory and policy literature. It included documents issued by different international organisations, European institutions as well as country-specific documents. The desk review aimed at illustrating:

- the different PPP definitions and contractual arrangements,
- the policy context and the legislative framework relevant for PPP in the context of the EU policies and, more specifically, for Cohesion Policy, including specific provisions and incentives included in the revised regulatory framework 2014-2020,
- the use of PPP models in Cohesion Policy, and
- the role of the different stakeholders.

In-depth interviews. Interviews were instrumental to broaden the evidence basis beyond official regulatory and policy documents, especially to collect evidence on the most recent experiences and highlight the implementation challenges. Interviews provide an accurate analysis of stakeholder perceptions concerning the use of PPPs in Cohesion Policy and of the expected impact of the regulatory changes introduced in the 2004-2020 programming cycle. A total of 24 interviews were carried out as part of the study's interview programme (Annex 2). To gain a critical and unbiased view over the key issues addressed by this study, a broad spectrum of stakeholders at EU and national level were included: i) representatives from various EU institutions having different roles in policy design, delivery and assessment, ii) representatives from national administrations, iii) representatives from MAs and local stakeholders, iv) representatives from the private sector, and v) independent experts. Interviews had a number of core questions, which were drawn from the study research questions and were asked to all groups of interviewees, in order to create a solid evidence for the conclusions and recommendations of this study. At the same time, more specific questions were prepared to fully benefit from the specific knowledge of each respondent.

In-depth analysis of blended PPP projects. Eight case studies (Table 1) of PPP operations, seven of which involved the use of Cohesion Policy resources, were conducted to illustrate the many challenges of combining an ERDF/CF financing with a PPP arrangement.

Cases were selected in order to balance different criteria, such as timescale, sector and geographical target, delivery mechanism and institutional setting. Two projects, which have been in operation for several years, were included to look at the long-term effects of PPPs and at the way long concessions contracts are managed under changed circumstances. At the other extreme, two projects financed under the current implementation period were included, which also illustrate examples of combining European Structural and Investment Funds (ESIF) and/or European Fund for Strategic Investments (EFSI) resources in a PPP arrangement. Two projects in urban regeneration were identified to show how blending can take place at the local level in smaller scale projects. Projects in the ICT (Information and Communication Technologies) and environment sectors, were also included to reflect the sectoral distribution of past blending operations. Finally, in selecting case studies and relevant PPP project examples, the definition of PPP applied is that provided by the European PPP Expertise Centre (EPEC)[1] and Eurostat (Table 2), which identifies the bundling of construction and maintenance activities within a private operator as a minimum requirement for a PPP contract to be considered as such.

Table 1: The selected case studies

SECTOR	PROGRAMMING PERIOD		
	BEFORE 2007	2007-2013	2014-2020
Transport	1) Tagus Bridge Crossing (Vasco de Gama) – (**PT**) 2) Athens International Airport "Eleftherios Venizelos" (**GR**)		7) Bratislava by-pass D4-R7 (**SR**)
Urban regeneration		3) Biarritz Cité de l'Ocean (**FR**) 4) Sopot PPP Rail Station Revitalisation (**PL**)	
ICT		5) Cornwall Superfast (**UK**)	
Social Infrastructure			8) Treviso Hospital (**IT**)
Environment		6) Poznan waste to energy plant (**PL**)	

Finally, the study's scope requires to take into account some technical, legal and financial aspects related to the characteristics of PPP contracts. These technical details were minimized as much as possible, while the study focused on providing key insights of common principles, legal and methodological issues that public authorities are confronted with when blending ERDF/CF in a PPP arrangement. A PPP in Cohesion Policy glossary is enclosed in Annex 4 to facilitate readers' understanding of the most frequently used technical terms.

The study is structured as follows. **Section two** brings conceptual clarification on PPP definitions, use and arrangements. It also provides an overview of recent developments in PPP markets, especially in relation to the prolonged impact of the 2008 financial crisis. **Section three** concerns the policy and regulatory framework. It critically discusses the

[1] EPEC is the main EIB advisory tool dedicated to capacity building and promoting good practice in PPPs. Its role and operation are described in more detail in Section 4.

rationale for using PPPs and presents the key policy and regulatory steps that attempted to promote the use of PPPs in Cohesion Policy. It explains how a more PPP-friendly environment was introduced in the delivery of Cohesion Policy objectives and describes the different implementing and contractual arrangements that are allowed by current Cohesion Policy regulations. **Section four** addresses lessons from implementation. It provides an overview of the use of PPP in Cohesion Policy and of the support instruments employed by European Institutions and MS to facilitate the combination of the two processes. It discusses existing challenges in relation to project design, country specific conditions and incentives (or disincentives) created by Cohesion Policy implementation rules. It finally concludes by presenting key findings from eight case studies. **Section five** concludes and recommends possible lines of action within the current policy debate on the future of Cohesion Policy post-2020.

2. DEFINITION OF KEY PPP TERMS

KEY FINDINGS

- **PPPs encompass a variety of long-term contractual arrangements involving mixed responsibilities of the public and private sector** in the delivery of services of general interest and management of public assets. It is a financing and delivery mechanism as opposed to a purely private or purely public delivery.
- **There is no widely recognized definition of PPPs.** According to the EUROSTAT/EPEC definition, only projects that bundle construction and operational aspects are considered to be a PPP.
- **The contract between the public and the private parties is the critical legal component** in the PPP contract framework, **but by no means the only one**. The variety of arrangements, that are often the result of a combination of multiple contracts, **show how misleading it can be to think about "PPP vs public procurement" delivery as a binary choice.**
- **In Europe the PPP market has steadily increased until the middle of the past decade and started to decline after the financial and economic crisis,** which created liquidity shortages that substantially increased the cost of private finance.
- **The UK has the largest PPP market in Europe and in the world**. Other large PPP markets emerged in France, Spain, Portugal, Germany and Greece.
- **The volume of investment going into PPP projects is generally concentrated in the more traditional infrastructure sectors, especially transport**, but in more mature markets, such as the UK, PPPs have been also used to deliver education and healthcare infrastructures.
- **The rationale for the use of the PPP model lies in the expectation that,** as compared to traditional procurement**, PPP projects can provide better value for money**. However, **the evidence on the superior performance of PPPs is still limited and not conclusive**.
- **Fiscal incentives can bias the value for money assessment when public budgets are severely constrained by debt limits**. PPP may create a monetary illusion that projects can be realized without increasing public expenditures and, ultimately, debt.

2.1. What are Public-Private Partnerships

The **definition** of PPPs in the international practice, as well as in recent EU policy documents, **encompasses a variety** of long-term contractual arrangements involving the private sector in the construction and management of public sector assets and in the provision of related services and involving some payment-for-results provisions. There is no widely recognized definition of PPPs in international organizations and countries (Table 2). As compared to definition used by other organizations, the definition applied by the CPR is less restrictive. Such a broad approach to the definition of PPP can be seen as an attempt to keep the doors sufficiently open to design suitable schemes in a variety of contexts and typologies of operations.

Table 2: A wide array of PPP definitions

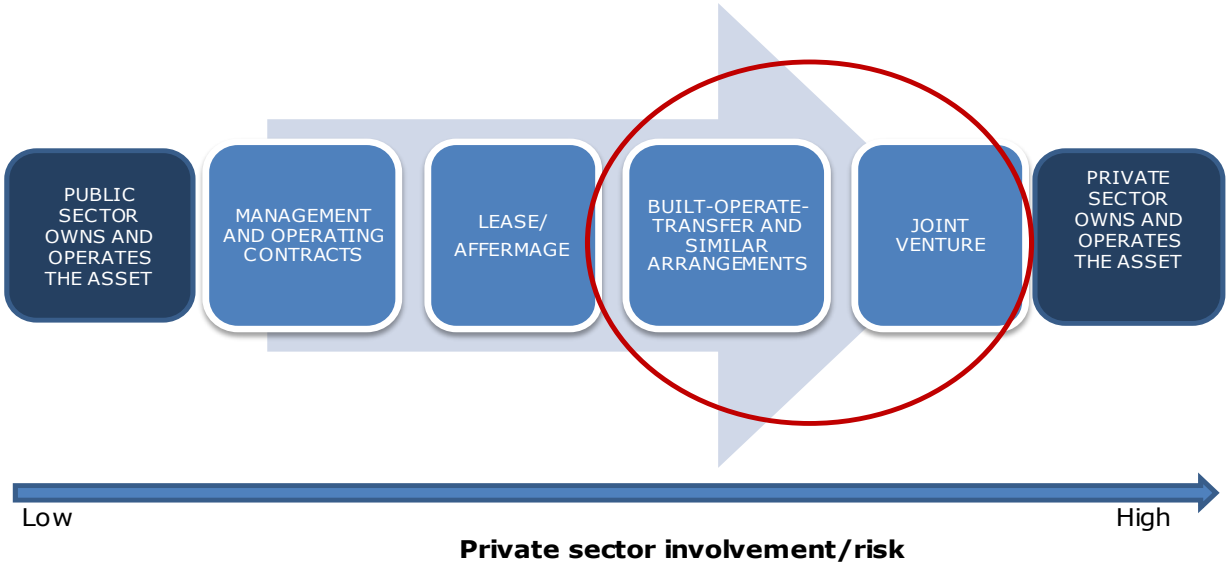
SOURCE	DEFINITION
European Commission	PPPs are **forms of cooperation between public authorities and the private sector that aim to modernise the delivery of infrastructure and strategic public services**. In some cases, PPPs involve the financing, design, construction, renovation, management or maintenance of an infrastructure asset; in others, they incorporate the provision of a service traditionally delivered by public institutions. Whilst **the principal focus of PPPs should be on promoting efficiency in public services through risk sharing and harnessing private sector expertise**, they can also relieve the immediate pressure on public finances by providing an additional source of capital. In turn, public sector participation in a project may offer important safeguards for private investors, in particular the stability of long term cash-flows from public finances, and can incorporate important social or environmental benefits into a project.
CPR (art.24)	PPPs means forms of **cooperation between public bodies and the private sector**, which aim to improve the delivery of investments in infrastructure projects or other types of operations, delivering public services through **risk sharing, pooling of private sector expertise or additional sources of capital**.
EUROSTAT	The term PPPs is widely used for **many different types of long-term contracts between government and corporations for the provision of public assets**. In PPPs, government agrees to buy services from a non-government unit (a partner) over a long period of time, **resulting from the use of specific "dedicated assets", which the non-government unit builds to supply the service**. The asset is usually used for the provision of public services, such as in the domain of health (hospitals), education (schools and universities), and public security (prisons) or in the context of transport and communication structures.
EPEC	• A **long-term contract between a public contracting authority** (..) **and a private sector company** (…) **based on the procurement of services**, not assets; • The **transfer of certain project risks** to the private sector, notably with regard to designing, building, operating and/or financing the project; • A focus on the **specification of project outputs** rather than project inputs, taking account of the whole life cycle implications for the project; • The **application of private financing** (..) to underpin the risks transferred to the private sector; • **Payments to the private sector which reflect the services delivered**.
OECD	**An agreement between the government and one or more private partners** (which may include the operators and the financers) according to

SOURCE	DEFINITION
	which **the private partners deliver the service** in such a manner that **the service delivery objectives of the government are aligned with the profit objectives of the private partners** and where the effectiveness of the alignment depends on a **sufficient transfer of risk to the private partners**.
World Bank	A **long-term contract between a private party and a government entity,** for providing a public **asset or service**, in which the **private party bears significant risk** and management responsibility, and **remuneration is linked to performance**.

Source: Authors based on EPEC, 2011; OECD, 2008; World Bank, 2014; Eurostat, 2016; EC, 2009

There is in fact **a continuum of options between a narrowly defined PPP operation,** namely regulated by a long-term concession contract, structured as a project finance scheme with a dedicated, legally separate project vehicle and limited recourse to shareholders' balance sheets, **and a conventional public procurement**, based on detailed technical specifications, tendered for the construction phase only. Depending on the specific configuration of the relationship between the public and private parties, and especially the way on which the PPP contract regulates the transfer of risks from the public to the private party, there are many alternative PPP options. Following the extent of private sector participation in the delivery of a public service, the World Bank PPP Infrastructure Resource Center identifies four categories of PPP models, while at the extreme end of each segment are forms of conventional public procurements (left end side of the chart) and divestment of public assets (right end side) (Figure 1).

Figure 1: Categories of PPP arrangements



Source: Authors' elaboration based on the World Bank's Public Private Partnership in Infrastructure Resource Centre (PPPIRC)[2]

[2] See https://ppp.worldbank.org/public-private-partnership/agreements.

The World Bank's interpretation outlined above adopts a wide scope of the partnership concept to include various forms of alternative public service delivery, such as outsourcing certain functions, which do not necessarily imply the bundling of design, build and operation tasks typical of traditional PPPs. For instance, manage and operating contracts do not involve ownership and transfer back to the public sector. Under the leasing/affermage option, the public authority retains responsibility for financing and managing the investment. **In the EPEC definition, which is applied consistently throughout this study,** only projects in which the PPP contract integrates construction and operational aspects are considered as PPP (two categories in the red circle in Figure 1). This conceptual approach is narrower than the one proposed by the World Bank and identifies the bundling of construction and maintenance activities within the private operator as a minimum requirement for a PPP contract. The reason why this definition was adopted is that it is better aligned with the PPP concept used in EU policy documents and consistent with the Eurostat definition (Eurostat, 2016) and definitions applied in different OECD documents (Araújo, 2010 and OECD, 2011).

With respect to the specific design of the PPP contracts, several options exist depending on the specific role of the two parties in the contract and on the distribution of risks. In a basic PPP arrangement, the private sector is contracted for building and operating an asset according to predetermined performance and availability standards for a determined period of time. There are several variations of this basic structure, which rarely applies as such, and which can be differentiated according to three key elements: i) the source of capital for building the infrastructure, ii) the involvement of the private contractor in project design, and iii) the asset ownership during contract duration and at contract termination. All these possible combinations have brought about a plethora of contractual models, and acronyms, for the purpose of responding to specific project needs and public policy goals (Table 3).

Table 3: Some PPP contract varieties

ACRONYMS	FEATURE AND RATIONALE
DBO/DBOT/DBFO	The private sector specifies detailed asset design. The private sector is more likely to innovate and to use front-end technologies
DBFO	The private sector contributes to the financing of the asset and share financial risk
BTO/BOT	Public sector keeps the ownership of the asset, which can be transferred at the end of the construction period (BTO) or at the end of operation and maintenance contract (BOT).
BOO	The private sector maintains the ownership of the asset.

Note: D = Design, B = Build, F = Finance, O = Operate or Own, T = Transfer

The joint venture category, which is also known as institutionalized PPP, involves the public sector taking an equity stake in the company delivering the public service. This approach typically applies in utility investments, where the public sector wants to exercise some degree of control over day to day operations.

Irrespective of the specific model adopted, **PPP agreements are characterized by the following key elements**:

- **Long-term partnership.** PPPs are long term contractual agreements between the public sector and a private contractor, generally spanning along a timeframe of 20 to 30 years. The life-cycle approach is crucial to ensure the efficient use of resources, but it also implies that, during the course of implementation, changes in the context

or in the project specifications may imply a change in scope or renegotiation in the contractual terms.

- **Performance-based specifications.** In a PPP contract, project specifications focus on outputs rather than on inputs. For instance, in infrastructure development the service requirements of the asset management, rather than the technical details of the physical assets, are a key part of the PPP contract specifications.
- **Scale and complexity.** PPPs adopt a vertically integrated model of procurement which generally includes more phases of a project cycle, from desing to operation. This allows for the maximisation of performance-based incentives, but also introduces complexity in the contract management and specification.
- **Risk allocation.** These contracts include a significant degree of risk sharing between the public and sector parties, following the general principle that bearing the risk should be by the party best positioned to assess and manage risk probability and impact.
- **The payment mechanism.** The PPP payment mechanism defines how the private partner is remunerated. It can be based on user charges, government payments or a combination of both instruments. Traditionally, under a concession model, the private sector (the concessionare) is allowed to charge users of a public service fees. More recently, availability-based payment PPP structures, where the private partner gets predetermined payments from the public authority for the entire duration of the PPP contract, have emerged. These payments may be fixed or variable, depending on how the demand risk is shared between the two parties. Availability payments can thus be based on level of use, as in the case of shadow tolls, or on the simple availability of the asset.
- **A web of contracts.** The variety of contract forms shows how misleading it can be to think about "PPP vs public procurement" delivery as a binary choice. There are in fact several PPP structures (contract structures and the interlinked contracts) and the allocation of risks can be only judged by looking at the overall structure and the interrelationships between contracts.

2.2. Performance of PPP projects

The literature identifies two key drivers of the PPP model: the need to address increasing public finance pressure and the need to close the divide in physical infrastructure endowment in less developed countries or regions. The justification for the use of PPPs lies in the expectation that they can bring savings in public resources, while improving quality and efficiency of public spending. The PPP model may tap into superior private sector technical efficiency (Revees, 2013) and is also considered more suitable for achieving greater procurement discipline (Bain, 2009). However, the PPP model also brings about new risks and higher costs (Table 4). The economic convenience of PPPs, as compared to more traditional procurement alternatives, is questioned by examples of poor outcomes, unbalanced risk allocation between the public and private parties, short-term advantages undermined by higher long-term public financial obligations and the opportunistic use of PPPs as an ultimately inefficient way to circumvent public debt constraints (Tomasi, 2016).

Table 4: Benefits and risks of PPPs as compared to traditional procurement contracts

ADVANTAGES	RISKS
• Provision of **additional financial resources** for projects of public interest that cannot be financed in times of fiscal austerity. • **More efficient project delivery**, in terms of quality, timeframe and cost controls, as payments to the private contractor are performance-based. • **Higher probability to innovate**, as the private operator brings in know-how, technical expertise and managerial abilities. • By bundling the construction and the operation phases a PPP creates **incentives for reducing maintenance costs**, which are integrated in the investment decision. • **Increase the cost-effectiveness** of public funds by allowing the public authority to direct scarce budgetary resources to economically valuable investment which cannot generate revenues (leaving revenues-generating projects for PPPs). • Another route to increase the cost-effectiveness of public funds is through the **value for money (VfM) analysis** (see box 1) where the PPP option is compared with conventional procurement.	• **Higher cost of financing**, because the private operator has higher access to finance costs, as compared to the public operator. • **Higher transaction costs**, as PPP models are generally more complex from a contractual and organisational point of view compared to conventional public procurement. • There can be **opportunistic behaviors in the public sector**, especially when the PPP is recorded off-budget through a Special Purpose Vehicle (SPV) company that is classified outside the public sector. This creates short-term fiscal advantages, but jeopardize fiscal monitoring. • **Opportunistic behaviors in the private sector** include underbidding and subsequent re-negotiation of terms and conditions and underinvestment in the later stages of the PPP contracts as the conditions of the reference market change.

Source: Authors' synthesis based on literature review

The potential risks of the PPP approach are well-known and mostly **depend on the difficult combination of public and private interests**. In particular, profit-driven private operators may give excessive focus to minimising construction and operating costs, as opposed to providing high-quality services. Unbalanced negotiation skills between the public and private parties in complex contracts typical of PPP arrangements may create a bias in favour of the private party, with the public sector bearing more risks, and costs, than initially anticipated.

As a matter of fact, **assessing the costs and benefits of the PPP approach**, as compared to other public service delivering modalities, **is a very complex exercise because it has to be based on multiple variables and stakeholder needs**, and has to deal with the uncertainty of a long-term contract. **Tacking stock of evaluation of PPP projects and**

drawing general conclusions about their success or failure is a difficult task that is confronted with a number of constraints that often undermine the robustness of conclusions.

Lack of a counterfactual. When considering VfM the critical question is whether the total costs and benefits of a PPP are lower or higher than the comparator traditional procurement. In this respect, the evidence from the literature is not conclusive. Evaluation studies overly focus on the advantages or disadvantages of opting for the PPP model in the short period, but do not provide general conclusions on which procurement route offers a lower project whole-life cost (Uzunkaya, 2014).

Contract diversity. There are several challenges in combining in a single evaluation PPP projects in different sectors, because there are fundamental differences in the use of PPP contracts across sectors. In the UK, where PPP are mostly used to finance social infrastructure, the project revenues come from the public sector. In other countries, where PPP projects are mostly found in transport sector, end-user payments are key in determining the performance of the PPP. Furthermore, contractual details matter for each specific PPP making each PPP contract a unique project case.

Quantity of PPP transactions. In order to draw general conclusions on the advantages of PPP procurement, it is necessary to analyse a significant number of PPP contracts through a regular and standardized performance review. The most rigorous analysis of PPP have been conducted by national court of auditors[3], but a major limitation of these in-depth assessments is that they generally focus on a very limited number of projects, with the notable exception of the UK, and that conclusions are context-specific rather than providing general lessons.

Long-term benefits of PPPs. PPPs are based on long term contracts, often exceeding 20 years, which implies that the benefit of a PPP can only be fully assessed in the long-term by integrating modified market conditions and subsequent renegotiations. For this reason, there has not been enough work done to properly evaluate the success of PPP projects at the time the agreement has expired. Evaluation studies, which focus only on the construction performance, might end up with completely different conclusions as compared to studies that also incorporate the operation phase. In this respect, the case study of the Tagus Bridge in Portugal (Annex 3.2) provides a clear illustrative example. While at construction termination the project was seen as successful, over the years, renegotiation of the original PPP contract had an unexpected negative impact on public finances.

Performance metric. What constitutes 'success' for PPP is a debated issue, because PPP contracts pursue multiple objectives that are not always aligned. PPP can be evaluated by using a narrow angle, which looks at the PPP performance against defined contractual targets, or by applying a broader perspective that integrates wider benefits and societal gains. There is not a prevailing meta-framework that guides evaluation studies, whose design is often influenced by the specific purpose of the evaluation.

Data limitation. Accessing financial details of individual PPP contracts is notoriously difficult. This information is generally considered by the private and public party as commercially sensitive.

[3] Examples include: i) Comptroller and Auditor General (2012), Report of the Comptroller and Auditor General (2011), Dublin: Stationery Office, and ii) *Les partenariats public-privé des collectivités territoriales: des risques à maîtriser*, France Court of Auditors (2015).

As PPP becomes more common in the provision of public services in European countries, the advantages of PPP, as compared to public procurement, in delivering better services and providing a higher VfM, has been subject to increased scrutiny. Yet, **the evidence is far from conclusive and there is still intense debate among academics and practitioners whether PPPs are suitable vehicles for creating better VfM** (see Box 1). The literature includes controversial views on the merits of PPP contracts and identifies many examples of PPP failures and successes in different countries and sectors. Generally, advocates of the PPP model argue that such arrangements allow a more efficient delivery of public infrastructure assets, which is based on assigning more tasks to a competitive and innovative private sector partner. Critics of the PPP model have pointed to a number of potential problems with the PPP model, including unclear, and potentially unsustainable public finance implications, and reduced flexibility to possible changes in the demand of public services.

For the purpose of this review, a broad public policy perspective is used to summarize findings in the literature that looks at the performance of PPP models (Figure 2). **While the literature supports the idea that PPP projects are more performing** (i.e. concluded on time and with the expected budget), **there are many open issues concerning the real long-term costs of PPPs for the public sector, and ultimately taxpayers**.

Figure 2: Assessment framework used for summarizing evidence of PPP performance

VALUE FOR MONEY	PUBLIC FINANCE	GOVERNANCE
•**Drivers**: efficiency, superior private sector innovation, risk transfer. •**Obstacles**: transaction costs, lower capital cost for public finances	•Implications for public debt levels	•Accountability •Transparency

Source: Authors based on Revees, 2013

Value for money. The driver for choosing the PPP route instead of the traditional public procurement route is the pursuit of VfM, which shall not be taken for granted but verified on a case by case basis. This implies to verify that the specific conditions leading to the maximisation of the PPP advantages, as well as the limitation of the associated risks, are ensured. **To justify the choice of the PPP option, public authorities are usually required to estimate the benefits of the PPP option relative to conventional procurement approaches**. In most European countries, this is actually a mandatory requirement and the VfM estimate has to be performed at the initial stage of project preparation. However, not only the VfM concept is blurred and difficult to grasp, but there is not either a well-defined and conclusive metrics for a systematic assessment (Box 1).

The decision on which procurement route delivers the highest VfM is rarely as simple as such. **There are many factors, including political choices, which underpin the choice of a PPP**. The VfM objective is also blurred and can be defined using different metrics while attributing costs and benefits of a PPP contract (OECD, 2012). Critics of the PPP model believe that ex-ante assessments of the PPP option often suffer from an optimism bias, especially in relation to the estimated demand for services. A general challenge in assessing VfM is the identification of a counter-factual project upon which a comparable and hypothetical scenario

should be built. **Frequent mistakes in estimating VfM include wrong estimates of costs and revenues flows and inaccurate identification and quantifications of risks**. In addition to that, a major area that tends to be neglected in ex-ante VfM assessment is the overall societal costs, which should integrate quality of services and transaction costs for public administrations (Reeves 2012).

Box 1: What is Value for Money?

VfM generally refers to and economic and efficient use of public resources that balances overall costs and benefits beyond the objective of project cost minimization (i.e. awarding a project to the tenderer with the lowest price bid). VfM is about achieving public objectives by minimizing whole-life project costs (i.e. acquisition cost, cost of maintenance and running costs, disposal cost) and by getting the highest possible quality (i.e. ability to meet the contracting authority's technical requirements).

There are several techniques for assessing VfM and these are generally based on combining quantitative and qualitative approaches. The quantitative approach is grounded on the calculation of the Public Sector Comparator (PSC), which estimates the whole-life cost of carrying out the project through a traditional approach. VfM of PPP is ensured when it is possible to assess that the costs of the PSC overweight the costs of the PPP procurement. The following cost elements are included in the analysis.

- For the PSC: all capital and operating costs associated with building, owning, maintaining, and delivering a service over a pre-determined period of time. This estimate has to include financing costs (i.e. interest costs on public debt and issuance fees) and procurement costs, the cost of transferable risks and a competitive neutrality adjustment (i.e. removing the net competitive advantage of the public option).

- For the PPP procurement route: the present value[4] of payments to be made to the private partner, the value of any risks retained by the public sector and any ancillary costs[5] borne by the public agency, including transaction and contract oversight costs.

A qualitative analysis often complements the results of the quantitative estimates by integrating the potential non-financial benefits and/or disadvantages of the PPP procurement route. Qualitative factors relate to how the contracting authority values different public objectives such as innovation, environmental and social goals.

Source: Authors' elaboration from various sources

In the UK, VfM assessments have become more central in underlying PPP decisions in the aftermath of the financial crisis when cost of private financing increased by 20 % and 33 % undermining the business case in favour of several PPP projects. After having published more than 72 reports on the VfM of using PPP, the UK National Accounting Office concluded that there is not a robust evaluation of the superior performance of the PPP model as compared to other procurement routes (NAO 2009, 2011). In France, the Court of Auditors questioned the soundness of the methodology pursued in assessing the cost and benefits of PPP as compared to the traditional procurement route. Comparative analysis are often based on questionable hypotheses that systematically favor the choice of the PPP contract by minimizing its additional costs. While comparative analysis generally recognize that the PPP option is more expensive, because of the need to remunerate private capital, once risks are

4 The present value is the value of the future expected payments calculated at the date of calculation, applying a discount factor to the stream of payments.

5 These are any further costs additional to payments to the private sector specifically due to the selection of the PPP vs. conventional public procurement option.

taken into account the assessment turns in favor of the PPP route (Cour de Comptes, 2015). There are also cases in which public administrations have been very late in developing standards for performing VfM assessment. As an example, in 2015 Italy had not developed yet methodologies for establishing the VfM assessment tool (MEF, 2015).

Efficiency. PPPs are generally regarded as being more able to deliver infrastructure assets on time and within budget. This is because PPP arrangements are based upon a project life-cycle approach that creates incentives for completing works on time and optimizing costs of building and maintenance. While some of the advantages of the PPP approach can also be achieved in public procurement contracts, by embedding in contracts specific clauses that ensure price certainty and performance, the life cycle approach is more difficult to replicate outside the PPP procurement route. Even when these features of the PPP contract can be replicated in public sector contracts, in a PPP, the private sector has more incentives for monitoring performance because it is bearing the performance risk (Klein, 2015).

In an assessment that reviewed 66 PPP projects financed by the EIB that have completed construction and have entered operations, it was found that 85% of projects were delivered within budget. At the same time, 63% of projects were delivered on time, and a further 17% with only minor delays (up to four weeks). As for meeting the original project requirements, the report found out that 85% of projects were delivered according with their original specifications and when these were different it was because the public party required a change in the original design (Bain, 2009). Although the report noticed some inconsistency and incompleteness in project cost and completion date reporting requirements, it concluded that the observed general trend was enough robust to provide an indication of the high level of delivery efficiency that can be achieved in a PPP arrangement. These findings are consistent with an assessment of PPP projects implemented in the UK between 2003 and 2008, which found out that 69% of projects were delivered on schedule and that 65% of projects did not have cost overruns. The study also reported that public bodies were generally satisfied with the quality of services, although these views might have been biased by the fact that the public contractor needed to provide a further justification for the use of the PPP model (NAO, 2009). Nevertheless, it is worth noting that the perception of success or failure upon project completion might differ from the initial assessment after a longer period of operation[6].

Risk transfer. The amount and type of risk that is transferred to the private party is key in determining the results of the VfM assessment. There are several risks in a PPP projects, but the most frequent are: availability of site, operational risk, demand risk, political risk, design and construction, finance risk (e.g. refinancing, interest rates, exchange rates) and Force Majeure risk. **The guiding principle of risk allocation is that each party should bear the risk that is best able to manage. However, the reality is that PPP are long-term contracts that are designed under conditions of uncertainty**. In such a context, implementation of risk transfers can also be a challenge for the public sector, especially when demand forecast proves to be overly optimistic or market conditions substantially change. The literature reports several examples of projects in which the public sector failed to impose risk transfer (Reeves, 2013). In France, for the PPP signed by local administrations, risk allocation was found to be biased by poor contractual arrangements that were based on imprecise and incoherent financial clauses (Cour de Comptes, 2015).

6 See for instance the Tagus Bridge Case study in Annex 3.2

Box 2: The impact of overestimating demand levels in PPP contracts

Portugal. Fiscal reforms initiated in the aftermath of the financial crisis, led to the renegotiation of several PPP road funding schemes, which guaranteed too high reimbursements to the private contractor. These payments were calculated using overly optimistic projections for traffic volumes, interest rates and profitability. Measures put in place by the 2011 Memorandum of Understanding on Specific Economic Policy Conditionality for Portugal require the country to refrain from engaging in new PPPs before completion of the reviews on existing PPP contracts. Renegotiation of Portugal road PPP portfolio were necessary to reduce liabilities as the volume of the PPP project portfolio and its rapid increase raised serious fiscal and public accounts sustainability issues.

Ireland. To respond to the need to build road infrastructure, the National Road Authority in Ireland resorted to the PPP models to accelerate construction. The NRA was reported to be rather tough on negotiating risks with private contractors. However, the impact of the economic crisis was particularly severe in Ireland, traffic levels dropped and resulted in the state paying more than what was originally planned. In two cases (Clonee-Kekks and Limerick tunnel) the NRA had to enter into a renegotiation to share traffic risks and compensate the private contractor when the traffic levels fall beyond a certain level. The state started paying EUR 5.2 billion in 2011, and projections of the Comptroller and Auditor General reported that, if traffic keeps increasing by 2.5% a year, the Irish government will have to keep paying the private contractors up to 2025 and 2041 for Clonee-Kells and Limerick tunnel projects respectively (Revees, 2013).

Source: for Portugal: IMF, 2014; for Ireland: Revees, 2013

Superior innovation. There are few empirical studies of this aspect of PPP, because there are still few evaluations that include the operation phase. In the UK, the lack of standardized programme performance assessments was identified as major constraint in assessing whether a superior quality project was delivered through PPP arrangements. While single PPP contract establish clear performance measure mechanisms, these are not systematically aggregated at programme level and several inconsistencies were identified in the way costs were recorded (NAO, 2011).

Transaction costs. Every procurement contract entails a certain amount of transaction costs, for both the public and private party, which relate to project design, contracting and implementation. **Transaction costs are particularly relevant when the magnitude of the VfM of a PPP is small as compared to traditional public procurement**. **The true costs of PPPS are hardly ever disclosed**, although it is generally recognized that PPP contracts entail higher transaction costs as compared to traditional procurement. In principle, **the efficiency gains obtained by a PPP should be able to offset the higher transaction costs, but this has been never convincingly proved**, and is very much linked to context related variables, such as the sector and country in which the PPP took place and the project size (Hall, 2008).

Lower cost of finance. In principle, the interest rate on private sector loans exceeds the interest rate on public sector loans. Therefore, with respect to the cost of financing, PPPs are more expensive than the traditional public procurement route. For PPP implemented in the UK in the healthcare sector, the cost of private capital was 7% against a capital cost for building of 3.5% for the National Health Service (Hall, 2008). It remains, however, an open question whether governments are better than financial markets in assessing and diversifying risks, as it could be argued that through government financing tax payers actually provide an unremunerated credit insurance unrelated to project risk (Klein, 2014).

PPP and public finances. The risk on local finances of PPPs is often underestimated because it relates to commitments that are spread over a long period of time, generally up to 20 or 30 years. **The fiscal risk in PPP is linked to its statistical treatment** (Box 3). In traditional procurement, the public sector bears most of payments in the early stage of projects and faces lower payoffs in subsequent stages. The major incentive in statistical treatment of PPP costs is related to the possibility of spreading out PPP expenditures over the duration of the contract, which generally exceeds 20 years (Revees, 2013). **This accounting treatment is attractive to governments that have to manage tight fiscal deficits, because PPP expenditures do not enter immediately in the calculation of general government debt**. Two major risks can be identified. An affordability illusion, when governments postpone the fiscal liabilities that are linked to PPP projects. An excessive focus on off government balance sheet recording to the detriment of identifying sound business case in support of PPP projects. **The fiscal treatment of capital investment costs in a PPP is so important that it is unlikely that even well-prepared PPP projects are implemented unless they can be off-balance sheet** (EPEC, 2016c).

Box 3: What is off-balance-sheet treatment of PPPs?

MS need to decide whether and when PPP commitments should be recorded as to establish new public assets, liabilities or expenses. This is important because the Stability and Growth Pact requires MS to maintain fiscal discipline by setting limits and targets on government's liabilities and expenditures. The economic convergence criteria in the Stability and Growth Pact and the Excessive Deficit Procedure (defined by the Maastricht Treaty) require that the debt and deficit treatment of PPPs follows the European System of Accounts (ESA). Implementation of ESA rules is delivered through application of the Manual on Government Deficit and Debt by Eurostat, which ensures the appropriate treatment of statistical issues raised in the EU regarding government finance statistics. The statistical treatment of PPPs remains thus with national statistical authorities and, ultimately, Eurostat. Since ESA 2010 requires national accounts to use a "binary" reporting system, so that an asset has to be recorded as wholly government asset or a wholly private asset. In accordance with Eurostat accounting rules released in 2004 and 2013, if the private party bears construction risks, and at least another risk between variability of demand and volume and quality of outputs, then the PPP and the related assets can go off the balance sheet of the government. Additional criteria are used for borderline cases, including the disposal of the asset at the end of the contract, government obligations for maintenance costs and repayment of debt in the event of early contract determination. Under this configuration, only the regular payments for services are recorded over time by the public agency, while capital investment expenditures are recorded on private sector balance sheet.

Source: Authors' elaboration on the basis of Eurostat (2004, 2013, 2014)

The Eurostat definition has been subject to several criticisms, as it is too simple to align a PPP contract to fit into Eurostat criteria for an off-government balance sheet classification (Mühlenkamp, 2013). The evidence that institutional incentives have been overriding VfM considerations in underlying PPP decisions is quite robust. In this respect, the literature illustrates several examples of this opportunistic behaviour.

- Data from the EC Directorate-General for Economic and Financial Affairs shows that Portugal, Cyprus, Hungary and UK are the MS where the contingent liabilities related to off-balance PPPs are the greatest.
- In Hungary, between 2005 and 2006, the government supported the construction of major motorways through PPPs involving a state-owned company. All these expenditures were recorded off the balance sheet of the public contractor. When, upon

request from Eurostat, these expenditures were included in the public budget, this led to a deficit increase of a full percentage point of GDP (OECD, 2010).

- In the UK, the 2011 Fiscal Sustainability report prepared by the Office for Budget Responsibility, reported that the majority of PPP assets were held off-balance of the public sector balance sheet in the national accounts. If these capital liabilities were integrated in national public debt projections, they would amount to nearly EUR 39 billion, which corresponds to about 2.5% of GDP. The report concluded that "*As well as lacking transparency, this has fuelled a perception that PFI (Project Finance Initiative) has been used as a way to hold down official estimates of public sector indebtedness for a given amount of overall capital spending, rather than to achieve value for money*" (OBR, 2011). In 2009, accounting rules were modified to discourage the use of PPPs for accounting treatment reasons. However, there still remains an incentive to use PPP as these expenditures do not enter in the statistical calculations of public sector net debt (NAO, 2011).
- In France, between 2005 and 2012, about 78% of PPP contracts were signed by local administrations and many these contracts were quite clearly approved to overcome the fiscal constraints imposed on local public budgets. The long-term budgetary impacts of these contract were also often underestimated. About 97% of PPP contracts were subject to renegotiations, which were often unfavourable for the public partner, and PPP contracts proved to be more expensive than the traditional ones. The monthly availability payments to the private partner were often too high and constrained the capacity of local authorities to undertake new investments (Cour de Comptes, 2015).

In countries where the PPP models took off more recently or debt concerns have been high in the policy agenda, even before the financial crisis, **a system of checks and balance has helped to account PPP transactions more properly in public finances**. In Italy, where evolutions of the high public debt need to be carefully monitored, the government established that PPP statistical treatment has to be subject to a further control by the Italian National Statistical Institute (ISTAT). By applying this system to the 24 PPP contracts approved between 2010 and 2014, ISTAT identified that 95% of transaction, in terms of value, were recorded on balance (MEF, 2015). It is important to notice that in the Italian case the transfer of the construction risks to the private concessionaire is very rare, which implies that the PPP cannot be recorded off balance sheet as per the rules established by Eurostat.

PPP and the challenge for governance. Evidence shows that **VfM assessments are rarely subject to public scrutiny**, can be flawed with errors and, sometimes, manipulation, which ultimately translates in a loss of public accountability (Greve, 2011). **Lack of consultations with stakeholders while assessing VfM has also been identified as problematic**. In a study of VfM assessment for PPP projects in the Irish water services, it was found out that a more collaborative approach would have led to substantial revisions of the initial estimates (Reeves, 2013). A study carried out by the French Court of Auditors on PPPs signed by local administrations identified a number of irregularities that were due to a loose application of the principles of equal treatment and transparency of procedures in PPP competitive dialogue processes. In particular, traceability of competitive dialogue, which might cover both financial and technical aspects of the project, was not systematically ensured. **Transparency was also undermined by the use of unclear evaluation criteria** (Cour de Comptes, 2015). The UK National Accounting office noticed that there is insufficient data on returns made by equity investors in relation to the risks they are bearing, despite transparency is of outmost importance when contracts are subject to renegotiation or refinancing (NAO, 2011).

Technical and administrative capacity. Project assurance can also be at risk because the public sector lacks of the commercial skills that are available in the private sector for striking good PPP deals. Even when governments have established a solid PPP project assurance framework, as in the UK and Ireland, it happens very rarely that large projects are halted even when VfM is in doubt (Revees, 2013 and NAO, 2011). **The public sector tends to be over reliant on advisers, and generally does not have access to the same high-profile consultants used by private contractors**. In negotiation and management, the public sector might not have the necessary capacity to monitor changes in asset usage that are likely to occur in such long contracts (NAO, 2011).

2.3. Recent developments in the European PPP market

Despite different definitions regarding what constitutes a PPP create problems in aggregating and comparing data at EU level, a number of existing studies give at least an indication of major trends in PPP use (Annex 1)[7]. The following key elements were retained.

A declining trend after a steady increase. Following EPEC PPP definition, between 2000 and 2016, approximately 1 096 PPPs have reached financial close in 24 European countries with a cumulative amount of about EUR 282 billion. **Having steadily increased until the middle of this decade, both the number and value of the EU PPP market first stagnated and then started to decline**. In the aftermath of the financial crisis the European PPP market contracted, fluctuated until 2013 and collapsed in 2014 and 2015. The PPP market slowed down consistently in all MS. While this declining trend was reported worldwide, the contraction was more pronounced in the European market that showed a sort of disenchantment with the PPP experience. This sharp decrease can be explained by two elements: the impact of the financial crisis on public finances and financial markets and the extraordinary growth that PPP markets had before 2009. The European PPP market bounced back in 2016 and increased by 41% and 22% compared to 2015 in terms, respectively, of number and value of financial transactions. However, the overall value of the European PPP markets, which reached EUR 12 billion in 2016, remains far lower the 2006 peak, when it was valued EUR 27 billion.

Transport is the dominant sector. The transport sector, and in particular road projects, have the lion's share of the European PPP market. Between 2000 and 2015, nearly 56% of the value of PPP projects occurred in the transport sector, with more than 70% of this value generated in road projects. All MS recorded at least one active PPP project in the transport sector with the only exception of Sweden and Slovenia. In 2016, transport was confirmed to be the largest markets for PPP, while education sector followed recording the highest number of projects. While almost all MS follow this sector pattern, in the UK education and health PPPs absorb larger investments as compared to PPPs in the transport sector. Transport sector also features as the dominant sector for PPP in global statistics.

UK has the largest European PPP market, with France, Germany and Portugal gaining momentum after the crisis. The largest majority of PPP projects is found in the UK, which between 2000 and 2015 accounted for more than 45% of the value of the European PPP market. In the same period, other large PPP markets emerged in France, Spain, Portugal, Germany and Greece. At the other end of the spectrum, were Slovenia, Czech Republic and Denmark, displaying very low value of their domestic PPP markets. The financial crisis led to

[7] To provide an overview of the recent evolution of the PPP market in Europe three different sources were combined: i) data released by DG ECFIN, which combines data from Dealogic Projectware, Eurostat and OECD, between 2000 and 2015 (Tomasi, 2016), i) information prepared for the OECD 2013 annual meeting of senior PPP officials (PwC, 2013) and, iii) data from the latest European PPP market Update issued by EPEC (EPEC, 2016b).

a significant geographical diversification of the European PPP market. While the number and value of PPP projects diminished in Spain and UK, the PPP model gained momentum in other countries, including France, Germany and Portugal. The UK leadership in the European PPP market was confirmed in 2016, both in terms of value and number of PPP projects, while Spain has not recorded any PPP transaction. In the same year, France was rated the second largest European PPP market, confirming the country's increasing interest towards the PPP approach. There are several factors that explain the observed geographical and sector patterns of PPPs in the European market. A number of country specific conditions have facilitated the uptake of PPPs in certain countries. In the UK, which has the most mature PPP market in the world, the combination of a favourable regulatory environment, maturity of the financial sector, availability of expertise, as well as continuous political commitment and administrative reforms that allowed local administration to set up PPP agreements, have all contributed to the development of diversified PPP project pipelines, up to the point that PPPs become mainstreamed within the wider national and regional infrastructure programmes (EPEC, 2012c). At the other end of the spectrum, there are countries like the Czech Republic, with a promising but an underdeveloped PPP market, because of the predominance of an unfavourable domestic PPP climate. Overall, political commitment and public perception emerged as a strong driving force behind the uptake of the PPP project implementation modality, while capacity and skills constraints proved to be early obstacles that can be addressed through technical assistance and provision of professional advisory services, as in the case of Greece or Poland.

Macroeconomic significance of PPP is relatively small. Between 2000 and 2014 investments realized through PPPs were equal to 0.7% of total gross fixed capital formation (GFCF). The relevance of PPP is higher only when compared to the size of public investment, where it reached 15% of the total public GFCF. The macroeconomic relevance of PPP market is heterogeneous across Europe. It reached the highest level in Portugal and in the UK with respectively 4% and 2.5% of GFCF.

An emerging trend of small-scale PPP projects. In terms of the average size of the investments financed through PPP arrangements, European countries also behave differently. In countries with large infrastructure gaps, such as Greece, Portugal or Spain at the beginning of the 90s, PPPs were used for financing mega projects, such as Athens airport or the Vasco da Gama Bridge in Lisbon. After the financial crisis, tougher limits and controls on public expenditures have reduced appetite for large projects, which are now implemented more sporadically. Small scale PPP projects are typically implemented at the sub-national level and include a variety of public services such as energy-efficiency, street-lighting, municipal parking, development and maintenance of municipal parks or accommodation to students. In countries where local administrations have higher fiscal autonomy, and technical capacity, PPPs tend to be of small or medium scale. This is for instance the case of Germany where only 18% of PPPs have a total investment cost higher than EUR 70 million. Another specific characteristic of the German PPP market is the high participation of SMEs on first contractor level. In 2012, nearly 60% of PPP contracts were signed by SMEs (Dieter, 2014).

3. PPP IN COHESION POLICY

KEY FINDINGS

- The main **rationale for the use of PPPs in Cohesion Policy rests on the need to ensure additional funding sources** in a situation of strict fiscal deficit and public budget constraints.
- In the early phase the combination of PPP and Cohesion Policy resources took place on an ad-hoc basis, and **it is only during the 2007-2013 financial period that the use of PPPs to leverage EU funds became a more explicit and better articulated objective** of the ESIF regulatory framework.
- In the revised Cohesion Policy framework, **the use of PPP has been promoted as a tool to reinforce the effectiveness and efficiency of Cohesion Policy interventions.**
- Cohesion Policy resources can be combined in PPPs as **grants,** the most common approach insofar, but also through **revolving financial instruments**. Grants have typically been used in supporting PPPs for major investment projects, while financial instruments have been successful in certain countries for medium-sized PPP projects.
- **Cohesion Policy resources can be channelled and combined in multiple ways in PPP projects, but their use has thus far been limited to financing the construction phase**, as grant co-financing of availability payments is an option which has become available only with the 2014-2020 programming period.
- **A more extensive use of FIs is likely to generate more blended PPP projects,** given the wider sectoral scope for FIs in the current programming period.
- Different implementation arrangements and contractual forms for blending are available and the choice among them is determined by the **nature of investments, the institutional consensus, technical capacity and past experiences** in managing similar contracts.

3.1. The rationale for combining PPP with Cohesion resources

The founding philosophy of Cohesion Policy is to help minimising disparities and enhancing economic, social and territorial cohesion across European regions. For the achievement of its objectives, it relies on the ESIF[8], amongst which there are the ERDF and the CF. These were originally established respectively in 1975 and 1993 and targeted primarily investment areas in the physical infrastructure domain[9]. At the same time, the justification of Cohesion Policy action stems from market failure considerations (i.e. a situation in which the provision of goods and services is not efficient if left to the private sector action only). The typical example is a non-revenue generating project. In principle, the nature of the investment supported by the ERDF and CF may provide some opportunities for combining PPPs and Cohesion Policy resources, provided that certain conditions are met.

[8] The terminology "ESI Funds" was launched with the 2014-2020 programming period, putting together under the same regulatory framework several existing EU funds aimed at promoting structural adjustment within the EU. They include the ERDF, the European Social Fund (ESF), the CF, the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF).

[9] The ERDF focuses on the following areas of intervention: basic infrastructure, e.g. transport and environment (mainly in less developed regions); innovation and research; the digital agenda; support for SMEs; the low-carbon economy (especially in more developed regions). The Cohesion Fund finances transport and environment infrastructure projects in the Cohesion countries, i.e. those EU MS where the gross national income per inhabitant is less than 90% of the EU average.

The participation of private sector in the design and implementation of Cohesion Policy has been always promoted as part of a multiple stakeholder principle underpinning an endogenous regional development model. Notably, private sector operators have been either final beneficiaries of funds, especially for measures supporting industrial competitiveness, or contractors in public investment strategies. The role of fund providers or strategic partners in public sector investment strategies is more recent, and has become more and more central in the EU debate following the recent financial and economic crisis. In this context, PPPs are seen as a possible vehicle for helping Europe exit the crisis and face the public sector's limited ability to carry out the strategic public investments required to boost economic activity and enhance long-term competitiveness (EC, 2009; C, 2012). Several studies report that, under existing budget constraints, the quantity, quality and size of public infrastructures and services needed to reduce regional disparities within the EU have traditionally been driving the development of PPPs in the framework of EU Policies (PWC, 2004; EIB, 2004; Nyikos, 2014; EPC, 2012).

Since its inception, **Cohesion Policy has undergone several important reforms** (e.g. strong orientations to results and effectiveness, better use of resources and coordination amongst funds, concentration of resources on few investment priorities, etc.) **which have been calling for an enhanced role of the private sector in the achievement of policy objectives and later paved the way to the development of a more systematic framework for blended PPP projects**. Following criticisms related to the effectiveness of the policy during the 1990s, reforms have been introduced in the programming period 2007-2013 to enable a shift towards a delivery system based on a more effective and sustainable use of resources, an increased emphasis on quality and performance, a strong orientation to results, a place-based approach to investments and a better coordination and integration amongst different available instruments (Barca, 2009).

The current discussion concerning the future of Cohesion Policy post 2020 is focusing on the ways to make Cohesion Policy more effective and efficient in an economic environment which is still heavily affected by the consequences of the financial crisis[10]. The overarching objective of the reform is to **extract more financial leverage and policy impact from the increasingly scarce resources of the European budget** and more generally a fiscally stressed public sector. In this regard, the uncertainties related to the UK's decision to leave the EU has raised further concerns. The loss of the UK budgetary contribution is likely to entail either a lower EU budget overall or increased financing requirements for net payers after 2020. Significant impacts are also expected on the different EU spending headings, and thus on the overall Cohesion Policy budget and its distribution to MS, due to shifts in average levels of GDP per head.

In the revised Cohesion Policy framework, the use of PPP has been promoted as a tool to reinforce the effectiveness and efficiency of Cohesion Policy interventions, as well as to improve the quality and sustainability of projects financed. The broad rationale is based on the common assumptions underpinning the use of PPPs (see Chapter 2) that considers that, by involving the private sector in the delivery of services traditionally provided by the public sector, more innovative solutions, significant efficiency gains and the mobilisation of additional financial resources can be achieved[11]. The main arguments in favour of PPPs relate to expected impact on:

[10] In eleven EU MS (including Denmark, Finland, Greece, Italy, Portugal and Spain), GDP in 2015 remained lower than in 2007 (at constant prices). Although most EU countries have seen positive economic growth since at least 2014, rates of growth and job creation remain muted (European Parliament,2017a).

[11] See also the arguments in European Commission (2011b).

- Mobilising valuable additional sources of finance to ensure long-term sustainability of interventions;
- Bringing private sector know-how and management skills in the provision of public services, with possible positive impacts on value-for-money on public funds;
- A more realistic identification of needs and the efficient use of resources, possibly reducing the risk of wasting EU resources;
- Widening the opportunities to cooperate with other stakeholders (e.g. private sector and civil society partners), who are often keen to participate in EU funded projects;
- Triggering investments into innovative technologies and expand opportunities for further leveraging EU funds (e.g. financing pilot projects to demonstrate the feasibility of new developments);
- Using performance-based payment mechanisms often embedded in PPP models, which may be more aligned with the result-oriented agenda of Cohesion Policy, as compared to input-driven payments of more traditional public procurement schemes.

Beyond the crisis-related challenges, **PPPs are increasingly valued by the EC for their potential contribution to the achievement of the long-term EU objectives in terms of smart, sustainable and inclusive growth**. The Europe 2020 strategy, the overarching strategy laying down all the EU investments in the current decade, clearly states that "*Europe must also do all it can to leverage its financial means, pursue new avenues in using a combination of private and public finance and create innovative instruments to finance the needed investments, including PPPs*" (EC, 2010). In the same vein, **the current Multiannual Financial Framework**, which shapes the EU budget for the period 2014-2020, **puts strong emphasis on the role of the private sector in leveraging investment** and the importance of working together to develop innovative financial instruments in order to maximise the impact of the EU budget.

It is however recognised that **PPP cannot be seen as a one-size-fits-all solution, but that it should be placed within the broader discussion about the most appropriate funding mix currently available for public investment strategies**, both at the national and EU level. The EC reflection paper on the future of the EU finances points out that a right balance between direct spending and PPPs should be found. It is recognised that the EU budget can have a catalysing effect to stimulate the necessary additional private or national public investment, for instance to finance low-carbon energy infrastructure, and that this catalytic effect can be supported by appropriately structured PPP arrangements (EC, 2017). A recent EP resolution on the right funding mix for Europe's regions also stresses that combining ESI Funds (through both grants and financial instruments) with other funding sources can make the funding structure more attractive to beneficiaries and public and private sector investors, due to improved risk sharing and project performance, and thus help the instruments to provide better long-term growth potential (EP, 2017). Some concerns are also raised by the Committee of the Regions (CoR) which points to the need for a realistic assessment of the scope for the use of PPP in less developed regions, where the funding needs are more pressing but technical capacities of public authorities are also less developed. It is important to assess where private investments can support the cohesion objectives and where conventional grants would be more effective (CoR, 2015).

Although the role of the private sector in leveraging the impact of the EU budget is increasingly emphasized in EU policy statements, there is scarce evidence on the magnitude of the financial support that has been provided by the private sector. In the context of Cohesion Policy, there are not robust and complete data on the amount of

private resources leveraged. For the programming period 2007-2013, the data on private funding reported by MAs varies greatly in terms of quality and completeness. A little less than EUR 19 billion of private funding were reported to be employed for funding the implementation of OPs, which roughly corresponded to 5% of the total funds available. As compared to the previous programming period, only a marginal increase in private co-financing was reported (Applica, 2016).

3.2. Key milestones for integrating PPP in the Cohesion Policy legislative framework

Multiple motivations have determined the decision to employ PPP models in the context of Cohesion Policy and the development of a systematic EU strategic framework has taken shape and progressively consolidated over time at a relatively slow pace. The development of PPPs in the framework of Cohesion Policy can be illustrated as the crossroad of two evolving processes: on the one hand the PPPs, which are seen as an evolving approach to investment delivery already adopted in many EU countries[12]; on the other, Cohesion Policy, which has been evolving in response to a variety of challenges (Table 5).

Table 5: PPP and Cohesion Policy: parallel evolution

TIMELINE	PPP	COHESION POLICY
Before 2000	Project finance approach, corporate finance, BOT in infrastructure (power plants, mining applications); Large scale transportation projects in the EU (e.g. Channel Tunnel 1994, Tagus bridge 1998); Private Finance Initiative launched in the UK (1992); DBFO model in UK road sector.	ERDF (1975); CF established (1993); Multi-year programming approach (ERDF) in 1994-99.
2000-2006	PPP models applied in more EU countries and over a wider range of sectors.	PPP mentioned for the first time in the Council Regulation (EC) No. 1260/1999 for Structural Funds; 2003 EC – DG REGIO PPP Guidelines and complemented by the 2004 Resource Book on PPP case studies[13]

[12] See Chapter 1 for details on the geographical evolution of PPP markets in the EU.
[13] EC, 2003 and 2004.

TIMELINE	PPP	COHESION POLICY
2007-2013	PPP market severely affected by the financial crisis and recession.	Programming approach further consolidated. PPP becomes part of EU policy, explicitly mentioned in the general and specific funds regulations (mostly urban development programmes). Introduction of "innovative financial engineering instruments"
2014-2020	Continued recession affects infrastructure investment within the EU.	Programming approach focused on sectoral thematic objectives. ESI Funds are under the same regulatory framework[14]. PPPs specific provisions to facilitate use of PPPs in combination with EU funding.

Source: Authors' elaboration from different sources

The use of PPPs in combination with EU budgetary resources started in 1990s, specifically **in the transport sector**. One of the main conclusions of the Commission's White Paper on Growth, Competitiveness and Employment, published in December 1993, was that efforts should have been made to involve the private sector in financing and implementing Trans-European Networks' (TENs), as a way to accelerating this type of investment and improving its efficiency (EC, 1993). On this basis, it was decided to give priority to 14 large TEN transport projects (around ECU 99 billion of investments). Several of these projects, especially in the railway sector had, however, implementation delays, mostly due to a general decline in public spending for infrastructure investments related to the need of reducing public budget deficits. Legal, administrative and political obstacles in implementing PPP arrangements, also contributed to delay investments (Economic and Social Committee, 1998).

The first steps towards a Cohesion Policy strategic framework for blending private and Cohesion Policy resources date back to the establishment of the CF in 1994. **In this early phase the combination of PPP and Cohesion Policy resources took place on an ad-hoc basis, usually driven by the need to undertake large scale infrastructure investments** as critical components of the MS modernisation effort and catching up with the EU integration process. This often took place against a backdrop of binding national budgetary constraints, project-related technical challenges and fragmented financial and capital markets.

PPP was mentioned for the first time in the Council Regulation (EC) No. 1260/1999 as a way to leverage the effect of Community resources and better taking into account project's

[14] Although ESI Funds are under the same regulatory framework, the implementation of ESIF is not necessarily harmonised, especially when it comes to integrating the use of funds. However, fund-specific regulations do not incorporate PPP provisions.

profitability[15]. In 2003, Directorate General Regional Policy (DG REGIO) published the "*Guidelines for Successful Public-Private-Partnerships*" with the aim to guide PPP practitioners in the public sector willing to seize the opportunity of "blending" Cohesion Policy financing in PPPs. Identified key issues affecting the development of successful PPP schemes were: i) ensuring open market access and fair competition; ii) protecting the public interest and maximising value added; iii) defining the optimal level of grant financing both to realize a viable and sustainable project, but also to avoid any opportunity for windfall profits from grants; iv) assessing the most effective type of PPP for a given project (EC, 2003). These Guidelines were completed by a Resource Book developed by DG REGIO on the request of EU candidate countries in order to better understand the practical implementation issues related to PPP's schemes. This document provided a set of case studies of PPPs implemented in both Western and Central Europe encompassing various sectors of Cohesion Policy financing, including water and wastewater management, solid waste management and transport.

Under the 2007-2013 financial perspectives, the use of PPPs to leverage EU funds became a more explicit and better articulated objective of the Structural Funds regulatory framework. Council Regulation (EC) No. 1083/2006 pointed out that Cohesion Policy should ensure mutual coordination between funds and other financial instruments, such as the European Investment Bank (EIB) and the European Investment Fund (EIF), including the preparation of complex financial plans and PPPs (preamble 40). The regulation also stressed the need to enhance access to financing and innovative techniques, including PPPs with respect to the revitalisation of cities (Art 44) or urban development programmes (Art 78). MS were also provided with the possibility to engage private capital in the implementation of OPs (Art 52). For the first time, PPP was explicitly mentioned in relation to the ERDF, which was set to concentrate funding and achieve priorities, amongst others within the Convergence goal, including via PPPs (Art. 4 para 1 of the Council Regulation (EC) No. 1080/2006). Although not explicitly cited in the specific fund Council Regulation (EC) No 1084/2006, the CF was also expected to finance infrastructures in the environment and transport sector through PPPs.

Opportunities for a wider application of PPP in the achievement of Cohesion Policy objectives has also been provided in the current programming period. The Council Regulation (EC) No. 1303/2013, known as the CPR laying down the use of ESIF over 2014-2020 programming period, has explicitly recognised PPPs as an "*effective means of delivering operations which ensure public policy objectives by bringing together different forms of public and private resources*"[16]. A number of PPP-specific provisions were introduced by the CPR[17] and the subsequent delegated acts[18] with the aim to address some of the barriers encountered in the previous programming period and thus facilitate the integration between ESIF and PPP processes. **The existing regulatory framework for ESIF also expands the opportunities for combining PPPs with FIs**. Unlike the previous programming period, FIs supported by ESIF are now non-prescriptive with respect to sectors, beneficiaries and types of projects. FIs can be employed in the context of all the eleven Thematic Objectives for all MS and regions. Moreover, the CPR explicitly states that FIs should be "*designed and*

[15] See preamble 40 and Art. 29 (f) of Council Regulation (EC) No. 1260/1999 laying down general provisions on the Structural Funds. OJ L 161 , 26/06/1999, pp. 1 –42.

[16] Preamble 59 of the EC. Reg. 1303/2013.

[17] A new stand-alone chapter on PPPs has been introduced in the CPR focusing on the operational aspects of the allocation and disbursement of ESI funds to PPP projects, Chapter II (Articles 62-64) of the Council Regulation (EC) No. 1303/2013.

[18] Commission Delegated Regulation N. 480/2014, Commission Delegated Regulation N. 2015/1076, Commission Implementing Regulation N. 2015/207, Implementing Guidelines 2014-2020 (available at http://ec.europa.eu/regional_policy/en/information/legislation/guidance/).

implemented so as to promote substantial participation by private sector investors and financial institutions on an appropriate risk-sharing basis".

3.3. Routes to support PPPs through Cohesion Policy resources

Channelling support to PPPs through Cohesion Policy resources has taken place historically and can happen in multiple ways, as illustrated in the variety of approaches documented in chapter 2, 3 and in the case studies (Annex 3). In this respect, **the 2014-2020 regulatory framework offers further opportunities to adapt the implementation of blended PPPs to specific circumstances**. It is, however, useful to highlight two key dimensions that correlate with the implementation model. These are the size of projects and the type of Cohesion Policy support provided (i.e. grant vs revolving instruments). These dimensions are linked to two of the main routes to support PPPs, namely through operations classified as major projects and FIs. The two routes are in no way an exhaustive description of the modalities to support PPPs in the context of Cohesion Policy, but are probably the most commonly observed when a PPP procurement is embedded in a formally structured Cohesion Policy process.

3.3.1. The case of major projects

Since 1999, the Cohesion Policy legislative framework has been encouraging the recourse to private sources of financing for major investment projects, such as large-scale infrastructures, whose total cost is higher than EUR 50 million supported with funding from ERDF and/or CF as part of Regional and National OPs. **Major projects have been originally financed in the transport and environment sectors, but have increasingly expanded to other sectors such as culture, education, health, energy or ICT**.

Typically, **the combination of Cohesion Policy grants and other sources of finance** (e.g. from the private sector) **apply to major projects that generate a revenue**, such as those operations for which users pay for the services provided[19]. For these projects, the treatment of revenues is a crucial issue in the determination of the grant made available from the ERDF and/or CF. It becomes even more relevant in the case of PPPs which may be designed as user-pay schemes (EPEC, 2016a).

Generally, the EU grant for a major project is determined by multiplying the project's eligible expenditure, the amount of expenditure associated with the project which is eligible for EU co-financing, by the co-financing rate applicable in the relevant OP priority axis. **There are no specific provisions for the calculation of the EU grant in the case of blended PPP projects**. Therefore, the same rules for traditionally procured revenue generating projects apply to blended projects as long as there is net revenue generation[20].

A specific application mechanism is adopted for the selection and approval of major projects, including blended PPP projects. Within the shared management system characterizing the delivery of Cohesion Policy, the EC maintains, unlike other co-financed operations, direct responsibility for the financing decision of a major project (see Articles 100-103 of the CPR).

[19] The definition of revenue generating projects was provided, for the first time, by Art 55 of the Council Regulation (EC) No. 1083/2006 referring to "any operation involving an investment in infrastructure the use of which is subject to charges borne directly by users or any operation involving the sale or rent of land or buildings or any other provision of services against payment". In the previous Council Regulation (EC) No. 1260/1999 (laying down the use of Cohesion policy's funds) the use of private funds was mentioned with reference to projects generating "substantial net revenue" which should be tentatively defined as revenue higher than at least 25% of the total cost of the investment concerned" (preamble 40).

[20] The following cases do not include a "net revenue feature": projects that do not generate revenues (funding-gap rate equals 100%); projects whose revenues do not fully cover the operating costs (funding-gap rate equals 100%); projects subject to State-aid rules.

For the formal request of EU contribution, the MA is required to submit an application form[21] including a set of mandatory information items, including the results of feasibility and cost-benefit studies[22], as well as details on the PPP procurement (if applicable). **In the case of blended PPP major projects, the EC currently requires to adapt the application form by providing specific information concerning the PPP model adopted for the project** (Table 6)[23].

Table 6: Information to be provided in case of blended major projects: adapting the major project standard application form

SECTION	STANDARD INFORMATION	INFORMATION IN THE CASE OF PPP
Body/ies responsible for the implementation (beneficiary/ies)	Name and contact details of the grant beneficiary/ies.	If the private partner will be selected after the approval of operation and will be the beneficiary, the name of the public body initiating the operation is to be specified.
Capacity of the body responsible for project implementation	Information on the beneficiary's technical, legal, financial and administrative capacity.	If the private partner has not yet been selected, the information to be provided include: i) minimum criteria for pre-qualification and justification for these criteria; ii) arrangements for the preparation, monitoring and management of the PPP.
Project description	A map of the project location, information on the main project components and total cost estimates.	If the private partner is responsible for securing the location, no map identifying the project area I required.
Option Analysis	Criteria in selecting the best solution (with ranking of their importance and method of evaluation).	The rationale for the selection of the PPP procurement method, including an analysis of the VfM using a reasonable PSC.
Risk Assessment	Includes the risk matrix, proposed risk mitigation strategy and the body responsible for risk mitigation.	The risk matrix (if the private partner has already been selected) or the intended risk allocation under the PPP arrangements (if the operation has not yet been tendered).

Source: Authors, based on EPEC (2016) and Annex II of the Council Regulation (EC) No. 2015/207

[21] The standard application form is provided in Annex II to the Commission Implementing Regulation No 2015/207 - Format for submission of the information on a major project major project under ERDF/CF.

[22] See Art 101 of the CPR 1303/2013 for the full list of information to be submitted for the approval of a major project.

[23] In the previous programming period, the standard application form (Annex XXI on major project request for confirmation of assistance under Articles 39 to 41 of Council Regulation (EC) No. 1083/2006) included a specific section (B.4.d) requiring to provide information on the form of the PPP (i.e., selection process for private partner, structure of PPP, infrastructure ownership, risk allocation arrangements, etc.) and details on how the infrastructure would have been managed after the project is completed (i.e., public management, concession, other form of PPP).

The application form submitted by the MA can either be reviewed directly by the EC or assessed by independent experts who will carry out an independent quality review. Under the independent review option experts notify the outcome of the review to the EC, who, in case of a favorable opinion, will confirm its no-objection[24]. It is up to the MS to decide between the two options and in case of a PPP procurement the EC approval of a major project is conditional upon the signature of the PPP agreement within three years from the initial approval. However, if duly motivated by the MS, in particular in case of delays resulting from administrative and legal proceedings related to the implementation of a major project, a maximum additional two-year extension may be granted[25].

Box 4: The value added of combining Cohesion Policy resources in major projects implemented through a PPP

Athens Airport (Greece). The Eleftherios Venizelos Athens International Airport supported by the CF in 1995 is often presented[26] as a pioneering case of PPP-funded construction and management of a new airport, the first of its kind in Europe. Like the Vasco de Gama crossing on the Tagus River in Lisbon, it represents one of the early cases where a PPP procurement was used in the context of Cohesion Policy. The approach was innovative at the time and fully in line with the criteria of the CF, including the intention to involve private sector resources to leverage cohesion policy resources. The availability of Cohesion Policy resources has facilitated the successful delivery of the PPP, although the overall proportion of CF resources has been relatively moderate (EUR 220 million corresponding to nearly 10% of the investment cost). The limited support from the CF was due to the significant revenue generation potential of the project, as the main international airport in Greece is favourably located to cater for the tourist market, the domestic market and international destinations in south-eastern Europe and the Middle East.

Superfast Cornwall (UK). This is a PPP in a major project financed by **the ERDF 2007-2013** in the Cornwall and the Isles of Scilly Region. It consisted in a next generation broadband based on fibre-optic cables and it is amongst the most significant PPP investments in UK in the ICT sector. The investment cost was EUR 153 million of which EUR 62 million (approximately 40%) came from an ERDF granted to British Telecom (BT) and EUR 91 million came from BT (approximately 60%). Being a major investment project, an application form was submitted to DG Regio for the approval of the EU grant. As the investment was specifically designed to be led by the private sector, BT was indicated as the direct beneficiary of the EU funds. Accordingly, the grant was calculated by following the 'funding gap' approach, where the public sector finances part of the initiative and leaves the rest of the investment to the private operator. The grant was provided to BT upon presentation of expenditure claims, including detailed original invoices. According to BT, this was the most challenging aspect of the project. Such a large investment in a rural area would not have been possible without the support of the public funds. ERDF funding has been key in covering the funding gap for building the ICT infrastructure, and mitigated thus the risk for both the public and private actors. ERDF resources were also used to support complementary activities that stimulated the uptake of broadband services. The PPP proved to be the most appropriate approach given that Cornwall Council was not in the position to finance entirely the investment cost and operate the network.

Sources: Annex 3.1 and 3.3

[24] Articles 101 and 102 of the Council Regulation (EC) No. 1303/2013.
[25] Article 102.3 of the Council Regulation (EC) No. 1303/2013.
[26] See for instance Omega Centre (2014), Benefit4trasport (2016).

3.3.2. The case of Financial Instruments

One of the main novelties introduced in the 2007-2013 programming period related to the introduction of so-called "innovative financial engineering instruments" as defined in the Council Regulation (EC) No. 1083/2006 (Council of Europe, 2006). These were referred to in Art. 44 as follows: "*As part of an operational programme, the Structural Funds[27] may finance expenditure in respect of an operation comprising contributions to support any of the following:*

- *Financial engineering instruments for enterprises, primarily small and medium-sized ones, such as venture capital funds, guarantee funds and loan funds;*
- *Urban development funds, that is, funds investing in public-private partnerships and other projects included in an integrated plan for sustainable urban development;*
- *Funds or other incentive schemes providing loans, guarantees for repayable investments, or equivalent instruments, for energy efficiency and use of renewable energy in buildings, including in existing housing."*

One of the instruments established by the regulation was specifically designed to support PPPs and explains why FIs can be seen as one of the main routes to assist the implementation of PPPs in the context of Cohesion Policy. Some of the features of the 2007-2013 Financial Engineering Instruments[28], which have been fundamentally maintained in the structure and operations of FIs in the 2014-2020 programming period are listed below.

- The financial support from the resources of the OP does not go to final recipients (i.e. projects), but to the FI, which takes responsibility to select and fund projects[29].
- The FI can be a specific one, e.g. an urban development fund, or possibly a holding fund which operates as a fund of funds, taking responsibility to structure specific FIs, select their managers and supervise their operation on behalf of the MA[30].
- The FI (e.g. the urban development fund) is responsible for allocating the funding received from the OP to individual projects, including specific PPP operations.
- The FI is typically managed[31] by an independent fund manager, the manager is a financial institution (commercial bank, national promotional bank) or possibly a specialised fund manager.
- Funds from Cohesion Policy resources are channelled by the manager to the project not as non-reimbursable grants but as revolving funds (i.e. employed as equity contributions, loans or guarantees), with a view to produce a return for the FI.
- The FI can be managed on behalf and for the benefit of the MA, in line with an investment strategy defined by the MA on the basis of the objectives of the OP.

[27] The European Regional Development Fund and the European Social Fund.

[28] The terminology "Financial Engineering Instruments" has been replaced with "Financial Instruments" in the current programming cycle. In the rest of the study, the terms "FI" and "FIs" will be used to refer to financial instruments, including those established in 2007-2013, as well as those funded on resources other than ESIF (e.g. other than shared management budget resources).

[29] It is useful to note that in operations implemented through FIs the term "final recipient" refers to the ultimate beneficiary of the EU resources, e.g. the SME or the infrastructure project. Thus, it differs from the "beneficiary", as, in the case of FIs, the financial instrument itself is considered the beneficiary as defined in Art. 2 (10) of the CPR ("a public or private body … responsible for initiating or both initiating and implementing operations").

[30] During the 2007-2013 programming period the EIB was often designated by competent MA as Holding Fund manager for the implementation of financial Instruments for sustainable urban development.

[31] Particularly in the current programming period there are various routes to establish a Financial Instrument and select the manager. All must comply with EU procurement and good governance rules.

Alternatively, in certain circumstances, MAs can take on directly the responsibility of implementing the FI[32].

- Funds managed via a FI can be used to support PPPs, but also for other types of projects.
- Finally, **the 2014-2020 regulatory framework introduced the obligation to carry out a specific ex-ante assessment for MAs intending to implement a FI**. This ex-ante assessment should establish evidence "of market failures or sub-optimal investment situations and the estimated level and scope of public investment needs"[33], in order to determine the size and investment strategy of the FI. In principle, **a more robust ex-ante analysis of this kind should facilitate both a rapid absorption of ESIF resources and a high effectiveness in the operation of the FI, including its ability to support PPP operations**.

Box 5: The value added of combining FIs from Cohesion Policy resources in PPP projects

Sopot railway station (Poland). This is a small-medium size PPP project in the field of urban regeneration. The project met the Regional OP eligibility criteria and benefitted from support available from a Financial Instrument established following the EU JESSICA initiative. The financial contribution from the JESSICA Financial Instrument (an Urban Development Fund managed by the Polish national development bank BGK), that amounted to EUR 10 million, was offered to the private partner on preferential conditions (a soft loan) and was critical to achieving the financial close of the project. The main reasons for Sopot's application for a JESSICA loan were financial, as the loan could be obtained on favourable conditions by the city. These conditions included a long tenor of up to 20 years from the date of the first disbursement, a long grace period[34] of up to 12 months after project completion and a preferential interest rate. However, it is important to notice that private partner's application for the JESSICA loan took a long time, over a 1 year, which was spent on negotiations and making several amendments to the loan application.

In applying for a JESSICA loan to the Pomerania Development Agency, the private partner had to comply with several ERDF regulations and conditions related to the JESSICA Urban Development Fund. It had to prove both the commercial nature of the project, which would guarantee a rate of return sufficient for the loan repayment, and its social character, whereby the outcomes of the project would have benefited the local population and contribute to raising their standards of living. As the private partner's own equity contribution to the project was also one of the conditions of the JESSICA soft loan, this ultimately leveraged equity contributions from the private partner.

Source: Annex 3.5

It is also important to mention that FIs, whose area of application covers a wide range of EU budgetary resources[35], can be established using resources that are either centrally managed or that are under shared management[36]. **In the current programming period the scope**

[32] This option was introduced in the 2014-2020 programming period. See Art. 38 (4) (c) of the CPR.
[33] See Art. 37 (2) of the CPR.
[34] A time period granted on a loan where the borrower does not have to make loan payments.
[35] See the Regulation (EU, EURATOM) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002, OJ L 298, 26.10.2012, p. 1–96. See also the synopsis document European Commission (2016d).
[36] The definition of Financial Instruments in Art. 2 of the Financial Regulation is as follows: "…Union measures of financial support provided on a complementary basis from the budget in order to address one or more specific

of activity for FIs and the opportunities to establish them have been widened, as well as the potential to use them in combination (e.g. central and shared management FIs), and using FIs with grants. For both centrally managed and shared management FIs, the role of the FI manager may turn out to be critical, including with respect to the preparation and execution PPP operations.

3.3.3. Other Routes

Other routes to implementing PPPs within Cohesion Policy cannot be easily standardised. Two examples can be mentioned.

Support to small and medium-sized PPP operations in OP via grants, where the size of the supported operation is below the major project threshold. There is no standardised system to record these operations at the European-wide level. According to a 2012 EPEC study (EPEC, 2012a) there is almost a 50% split between large (major project) and medium scale PPPs. These projects have been more common in developed regions where ERDF grants can be either used to finance an infrastructure investment or to support project components that are compatible with the OP priorities.

Box 6: The value added of combining ERDF grant in small/medium scale PPP projects

Biarritz Cité de l'Océan (France). This PPP project aimed at building a new major tourist attraction in the city of Biarritz consisting in a museum devoted to oceanographic science. The project was not eligible of financing under the regional OP, but some of the project components could receive ERDF support because they fit into the OP priority axis. The project received thus two ERDF grants from the Regional OP 2007-2013. In particular, the Musée de la Mer got a grant of EUR 1 650 641 under the thematic priority "sustainable development and risk prevention", and the Cité de l'Océan received a grant of EUR 2 181 000 under the thematic priority "Innovation, ICT". The ERDF grants amounted to approximately 9% of the cost of the investment and were combined with additional financial resources from the French state, the region, the department and the city of Biarritz. The ERDF contribution was key in achieving the necessary level of public financing.

The project was completed on time in 2011 and received the prestigious American Architecture Award in 2012. However, demand forecast proved to be over optimistic and the municipality ended up paying an availability fee to the constructor that could not be balanced by the museum's entrance fees. The PPP contract was eventually cancelled in 2014 by a decision of the Supreme French Court for non-compliance with the relevant PPP French laws.

Source: Annex 3.6

Centrally managed instruments that specifically aim at mobilising private sector finance, including via PPPs. The most obvious example is the EFSI established under the Juncker Plan. While the plan does not use Cohesion Policy resources, EFSI funded projects, including PPPs, particularly those located in less developed regions, are likely to have a significant impact on Cohesion Policy objectives. A specific illustration of how Cohesion and EFSI resources have been combined in a PPP within a Cohesion country is presented in the Bratislava by-pass case study (Box below and Annex A.3.7).

policy objectives of the Union. Such instruments may take the form of equity or quasi-equity investments, loans or guarantees, or other risk-sharing instruments, and may, where appropriate, be combined with grants".

Box 7: Blending EFSI support in PPP contracts

Treviso Hospital (Italy). The EIB provided a loan of EUR 29 million, backed by an EFSI guarantee, to Ospedal Grando S.p.A., a special vehicle company established for designing, constructing and operating the new Cittadella della Salute within the Ca' Foncello Hospital in Treviso. Under this PPP contract, the local health authority, Azienda Unità Locale Socio Sanitaria n. 2 Marca Trevigiana, has granted a 21-year concession to Ospedal Grando. This is a social sector investment that was not eligible for financing under Veneto Region OP, although some components, particularly those related to energy efficiency, could have received ESIF support. This is also the first EFSI project where the benefits of lower EIB's financing, as compared to commercial lenders, have been allocated in favour of social impact investments.

Bratislava by-pass D4R7 (Slovakia). This is a PPP project involving designing, financing and constructing of 27 km of the D4 motorway that will connect to the 37 km R7 expressway, thus forming a bypass ring-road around Bratislava. A high priority for the Slovak government, the D4 motorway is also part of the TEN-T. This was the first project in Slovakia to be supported by an EFSI guarantee, and the first to blend ESIF (loan) and EFSI support. While EFSI provided support for the senior debt, the ESIF loan could be treated as equity replacement by senior lenders. The ESIF loan also came on better terms. According to the Slovak authorities, being able to blend ESIF and EFSI funds was a definite positive factor.

Source: Annex 3.8 and 3.7

3.4. Implementing arrangements and contract structures

A key issue when undertaking blended PPP projects is to **determine the most appropriate way to employ EU grants in contract structures involving a private partner.** For presentation purposes, it is useful to consider contract structures as falling into two main categories, where the main distinguishing feature is whether or not there is a direct contribution of the private partner to the financing of the project (EPEC, 2016; Nyikos, 2014; Jaspers, 2010). The first category, where the project is funded only by the public sector, is not strictly speaking a typical PPP, but it is important to present the model as it illustrates how different contract structures affect the allocation of risks and the structure of incentives for a given operation, as well as how easy or cumbersome it is administratively to allocate EU grant funds to the project.

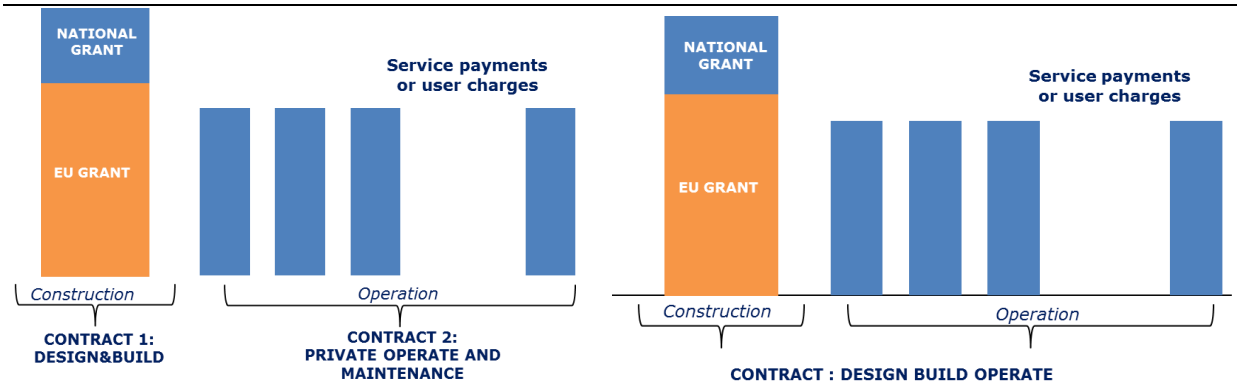
3.4.1. The public actor finances the construction of the asset

The first illustration is the **Design and Build (D&B) model, where building and operation/maintenance are contracted separately.** According to this model, often used in traditional public procurement, the public authority contracts a private party to provide and/or maintain a specific infrastructure service, usually for a limited period of time. Asset ownership and the overall management of the asset remains with the public authority. This model implies that the design and construction phase is separated from the operating and maintenance phase and managed through two different contracts. In the first contract the private entity is contracted to design and build the project. In the second contract, the same or a different private entity is in charge of operation and maintenance of the infrastructure. **From the perspective of injecting Cohesion Policy resources into a cooperative structure involving the private sector, this is the simplest structure as the construction phase is entirely financed via public funds.**

This model fits well with ERDF/CF conventional grant funding procedures, since the grant is directed to finance capital expenditures and no complications arise in relation to the identification of the provider of private funding and the timing of its financial contribution. **However, it is less clearly compatible with a true PPP logic, because there is no bundling of construction and operation in a single PPP contract** and incentives to efficient life-cycle delivery of infrastructure services are likely to be limited. In addition, opportunities to mobilise private finance to cover the cost of delivering the construction and operation services are by definition limited.

The **Design Build Operate (DBO)** approach is a further contracting option. The main difference with the previous structure lies in the fact that **there is a single contract committing the private partner both to the design and construction of the infrastructure asset and to the subsequent operation and maintenance**, normally for a pre-determined period of time. This allows for **a greater risk transfer to the private entity** compared to the D&B model, and potentially **an integrated "whole-life cost" approach** to the delivery of construction and operation services. **However, the cost of the project is still entirely covered by public funds, which finance the construction of the asset**. In doing this, the public authority can use a mix of resources that can include an ERDF/CF grant, but also other sources (e.g. EIB loans). As in the previous example, payments to the private partner can be made by the public partner to cover for the operating and maintenance cost. **The level of payments in the DBO model is established at the outset of the project by taking into account what is needed to cover maintenance costs, manage risk and possibly generate an acceptable profit**. In some sectors, such as transport, part of the revenue streams can directly come from user charges. In this case it is also possible, depending on contract clauses, that the commercial/demand risk is transferred to the private partner. **The payment mechanism is agreed at the project outset and linked to the specific performance targets expected to be achieved**. If the concessionaire fails in providing the service required or specific level of performance, payments from the contracting authority can be reduced. **The DBO model calls for a more consistent monitoring role compared to the previous approach**, since the public authority can adopt mechanisms to ensure that the operator fulfils its contractual obligations.

Figure 3: Combining EU and private funds in a D&B or DBO Model



Source: Authors, based on EPEC 2016a

3.4.2. The private party contributes to finance the construction of the asset

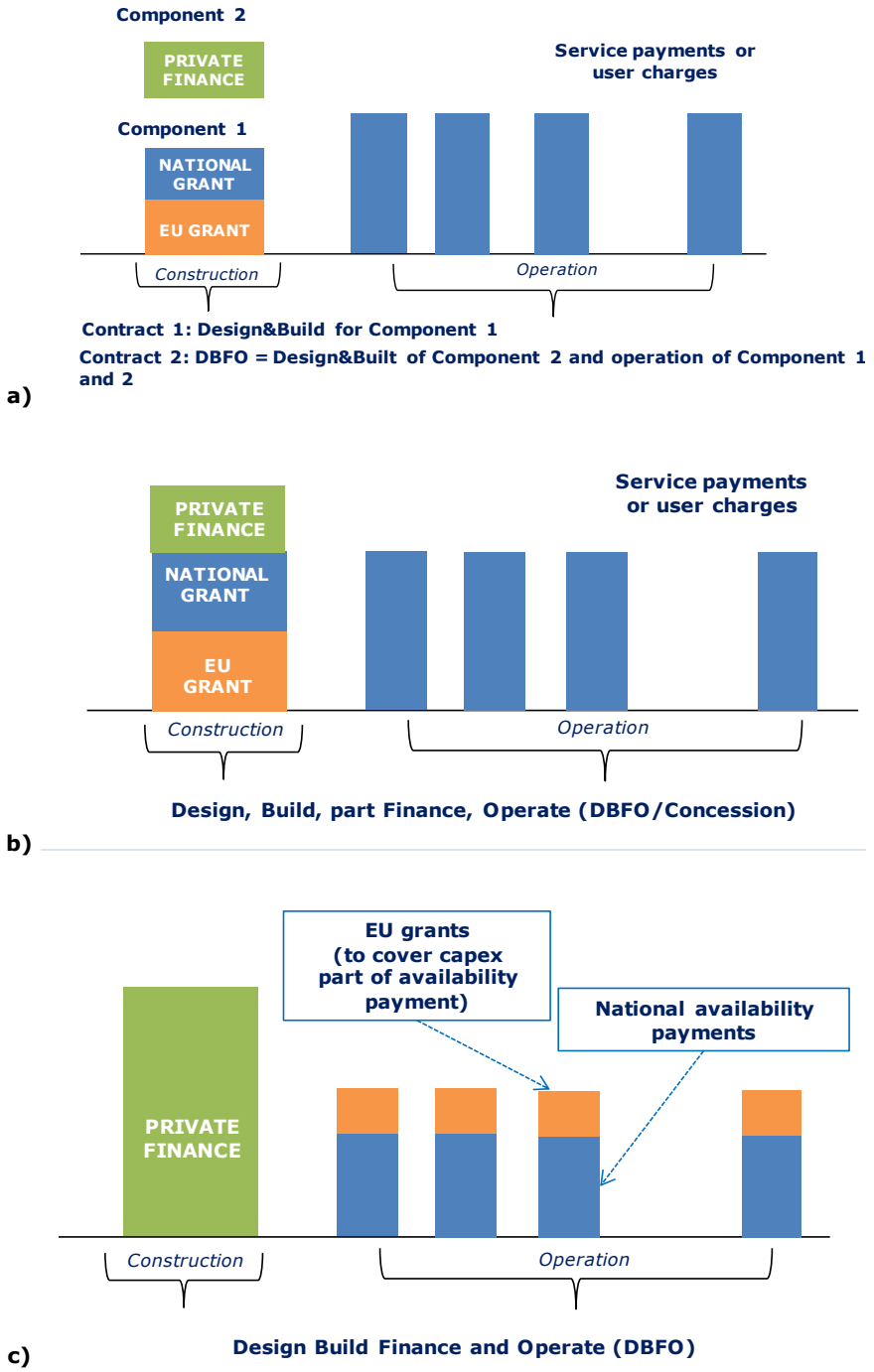
The other category includes contract arrangements which **explicitly incorporate an obligation by the private party to contribute to the financing of the project**. **This category is in fact more in line with the risk-sharing principles of the PPP model**, where the private partner enters a commitment to secure at least part of the financing requirements to build, maintain and operate the facilities. Depending on the specific contract structure in the financing of the infrastructure, the **Design, Build, Finance and Operate (DBFO)** model can take different forms.

Parallel co-financing of capital expenditure based on two separate contracts (see Figure 4a below). This structure entails the 'splitting' of an infrastructure project into two components, one of which is financed from public sources (including the EU grant) possibly under a conventional procurement procedure, the other as a PPP. For instance, public funds can be used for the design, construction and operation of a hospital building through a PPP. The public funds can be used for the design and construction of a separate unit of this building, which is then maintained by the private partner. This model is more complicated than the D&B model and may give rise to interface risks between the two components.

Joint finance covering construction and operation (see Figure 4b). According to this contract structure, the PPP project is financed from private and public sources (including EU support) through a single design, build, finance and operate contract between a conceding authority (the public party) and a concessionaire (the private party). In line with previous models, the use of the EU grant is still limited to the construction phase. However, the use of a single contract is likely to give a stronger incentive to the concessionaire to optimise the delivery of construction and O/M services throughout the life of the concession. It should also be noted that this is the most commonly used form of implementation of PPP in the infrastructure sector, typically used for long-term concessions in large scale projects. In some cases, the infrastructure can be returned to the conceding authority (transferred back at the end of the concession, whence the acronym BOT / BOOT sometimes used to indicate this type of contract). This is the contract structure used for instance for the Vasco de Gama bridge across the Tagus river (see Annex 3.3.2).

Grant co-financing of Availability Payments (see Figure 4c). **This is an option which has become available only with the 2014-2020 programming period** through the introduction of the escrow account (see Articles 42 and 64 of the CPR Regulation). The main difference compared to the previous contract forms lies in the time profile in the use of the EU support. A key change brought about by the 2014-2020 CPR is **the option to use the EU grant to co-fund payments to the private party after construction over the operational period of the project**, even if payments are due beyond the current programming period. **This is particularly well-suited to PPP arrangements based on availability payments by the public sector**, where construction expenditures are financed in full or in part by the private party and successively repaid by the public sector in the operation phase based on the availability of the assets and the private operator's ability to deliver the agreed service quality. **This new option may enable the public authority to achieve a higher degree of risk transfer to the private party as compared to previous DBFO co-financing models**. Under this option the Cohesion Policy resources can be set aside in a so-called escrow account to be paid over time. This may give the public sector more leverage to ensure higher quality of service delivery during the operation phase.

Figure 4: Combining EU and private funds in a DBFO model



Source: Authors, based on EPEC 2016a

The contract classification presented above has a number of relevant implications. Firstly, it should be seen in the context of the mechanisms that ensure a **balanced and resilient risk sharing** in the design and implementation of PPP operations within Cohesion Policy. In this respect it should be noted that **the contract or agreement** (often a concession contract) **between the public party and the private party is at the centre of the web of contracts** which determine the rights and obligations of the multiple parties of a PPP arrangement. This contract is generally the critical legal component in the contract framework, **but by no means the only one**. Other contracts, such as those dealing with construction, post-construction operation management, insurance and financial guarantees,

are also very much part of the picture and determine ultimately the long term-performance in the cooperative relationship between the public and private partners.

Secondly, **the decision on what solution to adopt for a blended PPP project**, besides VfM analysis, **often integrates the interests and incentives of the multiple stakeholders involved**. For instance, the D&B and DBO solutions may be less ambitious from the point of view of achieving the most appropriate risk sharing arrangement between the public and the private sector, but they may be far easier to implement in the context of an OP from a MA perspective. At the end, trade-offs between different objectives shape the decision-making process.

4. IMPLEMENTATION OF PPP IN COHESION POLICY

KEY FINDINGS

- **There is no unified source of data that consistently stores and classifies blended PPP project.** The available evidence on implementation of blended PPP projects is fragmented and mostly focused on major projects.
- **There is no clear link between the level of development of the national PPP market and the use of PPPs in the implementation of OPs.** The UK, which has one of the largest PPP market in the world, has a very limited number of blended PPP projects.
- A number of regulatory constraints have been limiting the opportunities to use PPP in Cohesion Policy. However, **the inclusion of PPP specific provisions in the 2014-2020 regulatory framework, has not yet triggered a wider use of PPP approaches in ESI Fund**.
- **The evidence on whether a PPP approach is conducive to higher levels of EU fund absorption is not conclusive**. The focus on achieving expenditure targets generally does not works in favour of the PPP approach.
- With respect to **promoting the combination of PPP and Cohesion Policy resources, the EIB has played two key roles**. It has been providing **advisory and technical assistance services along with financial support**. Since the beginning of the financial crisis, **the EIB has expanded the provision of financial instruments addressing PPP projects' bankability issue**.
- Most MS have set up centrally managed PPP units. However, **MS experiences on blended PPP project remains fragmented**. Only Greece has thus far managed to integrate more systematically the PPP approach in the delivery of Cohesion Policy.
- Case studies of blended PPP projects show that **PPPs are useful instruments to deliver projects on time and on budge**t. However, the **assessment of project outcomes is mixed, depends on the time period considered and on the parameters used for performing such an assessment**.
- Public sector decisions on whether to combine PPPs with Cohesion Policy resources have been driven by fiscal considerations. **The need to avoid an increase in public debt in the short term is often a critical driver for considering PPP solutions and justifying the additional costs and complexity.**

4.1. Mapping PPP projects within the framework of Cohesion Policy

The availability and quality of data on PPP projects supported by EU funding is limited by the lack of a unified source of data that consistently stores and classifies these projects. Existing databases[37] do not generally include information on whether a particular project has been also supported by ERDF/CF. The only attempt to estimate the number and size of PPP projects supported by Structural Funds or CF was carried out by the EPEC in 2012[38]. **Between 1996 and 2011, the EPEC counted 49 projects implemented**

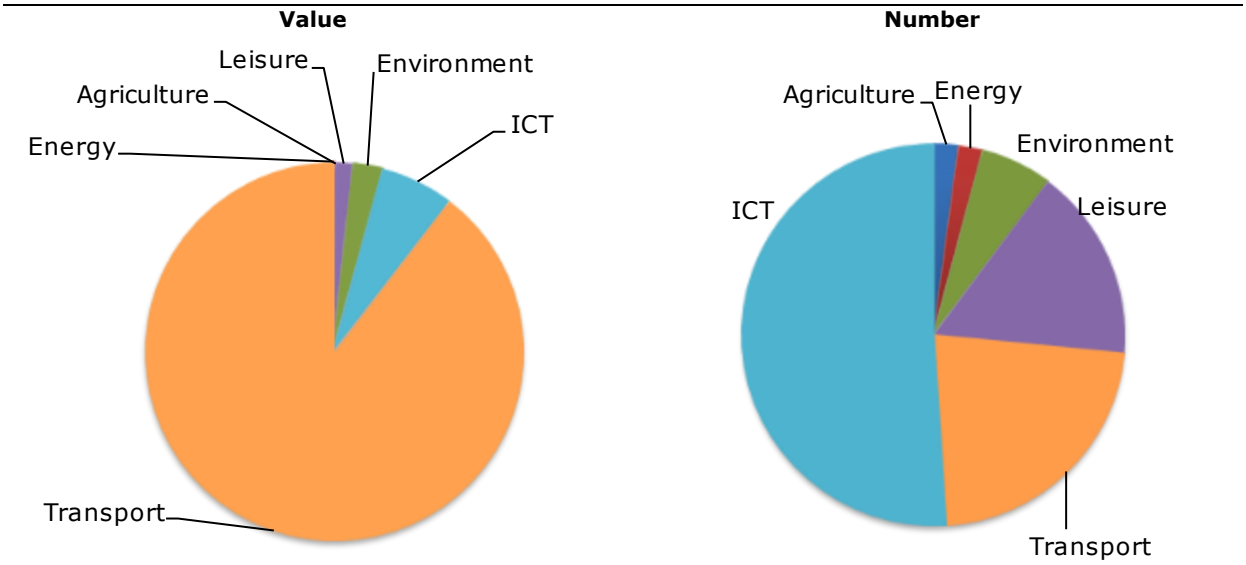
[37] Among the most well-known databases are those provided by Dealogic, Infrastructure Journal, Project Finance International, InfraPPP World, Public Works Financing, the World Bank's Private Participation in Infrastructure Group (web links are provided in the Bibliography). The database maintained by EPEC is not publicly available.

[38] The definition of PPP projects applied by the EPEC study is rather narrow. It only includes "bricks and mortar" PPPs (projects involving construction) and PPP where a private project financing component is present (i.e. excludes DBO models).

in 13 countries for a total value of slightly more than EUR 4 billion on a total of 1 500 PPP projects worth EUR 279 billion (EPEC, 2012a and 2016a).

Unsurprisingly, **transport PPP projects prevailed in terms of investment volume, while the largest number of blended PPP projects (25) were found in the ICT sector** (Figure 5). The leisure sector emerged as a sector where the use of PPPs was relatively new. **The ERDF was the predominant source of EU grants, co-financing 46 projects, while few large projects were supported by CF resources**.

Figure 5: Blended PPP projects by sector



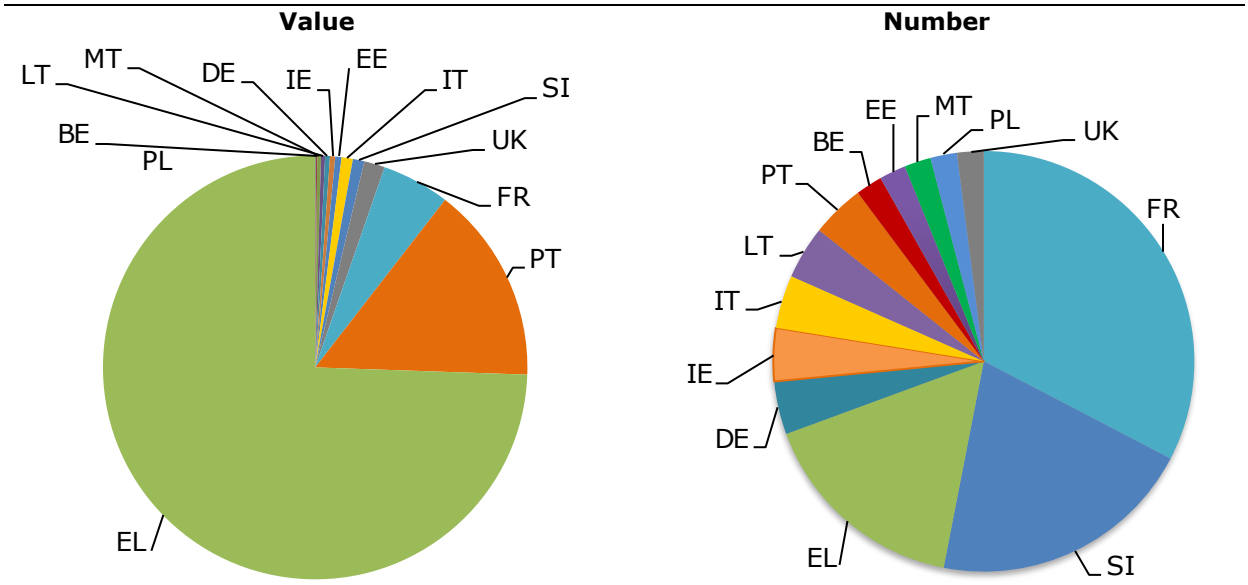
Source: Authors based on EPEC (2012)

The geographical distribution of PPP blended projects, **in terms of volume, is heavily concentrated in Greece followed by Portugal**, where a limited number of very large transportation and broadband projects were financed by Cohesion Policy instruments (Figure 6). France, which has a well-developed PPP market, and, surprisingly, Slovenia, recorded the highest number of PPP blended projects. **Only one project was recorded for the UK**, which is the largest European PPP market. This is explained by the fact that PPPs in the UK are predominantly used in the so-called social sectors, health and education, which are not priority investment areas for regional OPs in the UK.

The EPEC study posed several data collection challenges because neither the EC nor national authorities kept such a list of projects structured in an easy-to consult way. Data had to be gathered by combining an extensive desk research with findings from a survey administered to 200 MAs. Interviews had to be used at a later stage to verify whether the project included in the preliminary list meet the identified criteria. Nowadays, these data collection challenges still limit the possibility of mapping comprehensively the use of PPP in Cohesion Policy. Within DG REGIO, complete and easily accessible data on projects financed by Cohesion Policy and implemented through a PPP are only available for major projects. While in the programming period 2007-2013 the encoded data included in the application form included information on the PPP option, in the current period this is no longer the case and information about the procurement route has to be collected by looking into individual project dossiers. The lack of a centralized repository of data concerning the

previous period does not allow to undertake a comprehensive analysis of the financing of major PPPs projects in the Cohesion Policy framework. Another limitation of the DG REGIO data set is that it excludes PPP projects that were led by a private investor and where the ownership of the asset remains within the private operator. An example of this is the Superfast Cornwall project (Annex A.3) which is not included in DG REGIO dataset, since it is considered a private investment carried out by British Telecom which, within the framework of the project, benefitted from an ERDF grant (subject to state aid rules).

Figure 6: Blended PPP projects by country[39]

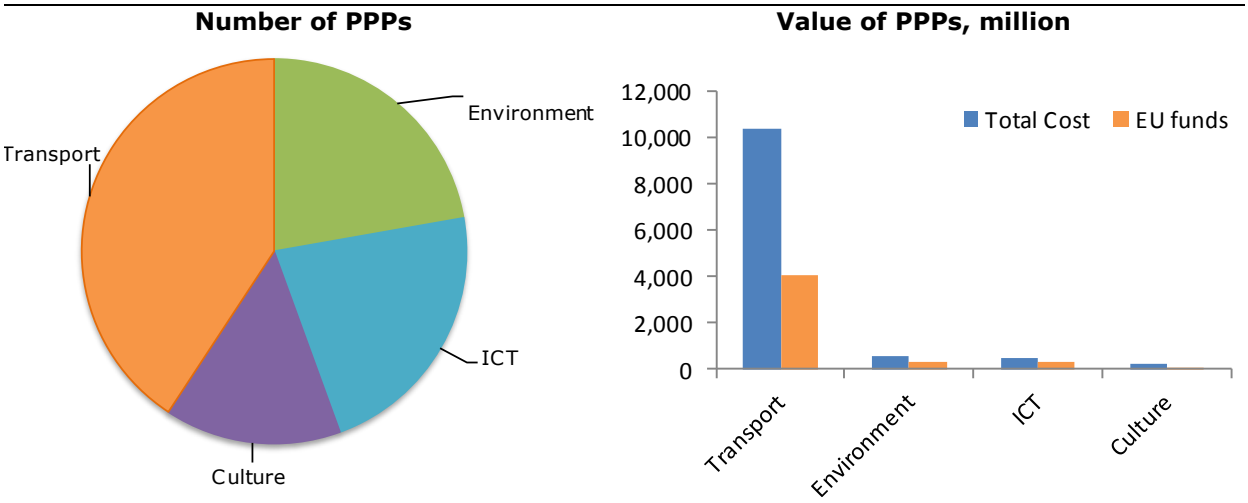


Source: Authors based on EPEC (2012)

According to the database provided by DG REGIO data, out of almost one thousand major projects, only 27 have been classified as PPP projects for the 2007-2013 programming period. This is a very small share which indicates that the financial significance of blended PPP projects is low. This number is much lower than that included in the EPEC study, but it is also based on a shorter period. The total value of the 27 PPP major projects amounts to EUR 11.7 billion, of which EUR 4.8 billion is Cohesion Policy contribution (ERDF and/or CF). In line with the findings of the EPEC study, **the largest number and value of PPP blended projects concerns the transport sector**: 11 projects for a total value of EUR 10.4 billion (of which 4 billion from Cohesion Policy contribution). Overall, the total value of major PPPs projects financed in other sectors, namely environment, culture and ICT, amounts to EUR 1.3 billion (of which 707 million from the Cohesion Policy contribution) (Figure 7).

[39] Country abbreviations corresponds to: BE (Belgium), DE (Germany), EE (Estonia), EL (Greece), ES (Spain), FR (France), IT (Italy), LT (Lithuania), MT (Malta), PL (Poland), PT (Portugal), SL (Slovenia), UK (United Kingdom).

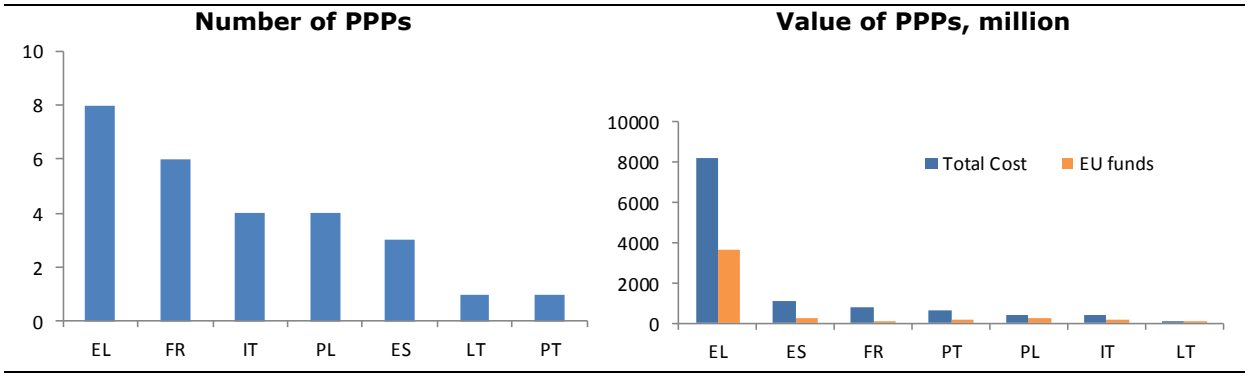
Figure 7: PPP in major projects by sectors, 2007-2013



Source: Authors based on DG REGIO data

The geographical pattern of projects, is similar to that identified by the EPEC study, but only includes 7 MS. Greece is the largest recipient, both in terms of number and value (Figure 8). In particular, the PPP major projects financed in Greece are mostly in the transport sector (6 in total), all concerning the financing of motorways as part of TEN-T projects, and ICT (2), including a project concerning the provision of services and applications for citizens (e-health, e-government, e-learning, e-inclusion, etc.) and a telephone infrastructure. Following Greece, the highest number of PPP major projects have been financed in France (6), Italy (4) and Poland (4), but the highest value is recorded in Spain with 3 major PPPs projects, of which 2 in the environment sector and 1 in the transport sector.

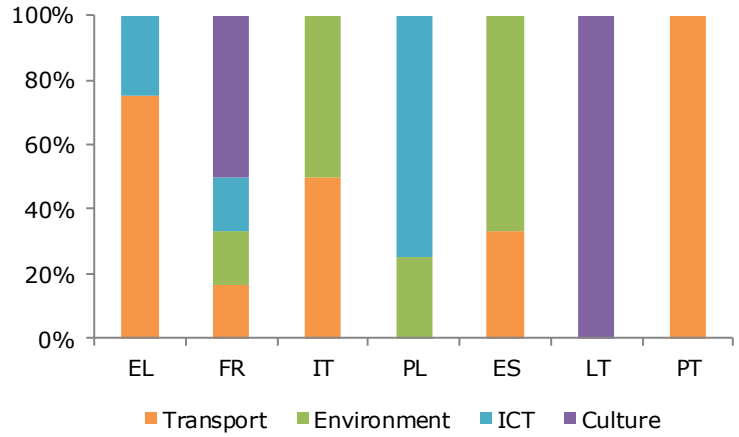
Figure 8: PPPs in major projects by countries, 2007-2013



Source: Authors, based on DG REGIO data

France has the largest sector diversification in applying PPPs in major projects (Figure 9). Culture is a sector where PPPs are applied in a limited number of countries, only France and Lithuania, while transport projects have been implemented in 5 out of 7 countries.

Figure 9: Major PPPs projects by countries and sectors, 2007-2013



Source: Authors, based on DG REGIO data

It is important to notice that **the EPEC study, as well as the DG REGIO database of major projects implemented through a PPP, are built on specific, and somehow restrictive, definitions of blended projects**. This leads to results that can be only used as proxy of the actual geographical and sector patterns of PPP use in Cohesion Policy. In particular, **the number of projects combining ERDF/CF with PPPs is likely to be higher and much diversified, especially when considering PPPs supported by the FIs** available within the Cohesion Policy framework. As per the current trend, findings from interviews indicate that **the use of the PPP model has not changed much as compared to the previous programming period despite improvements in the relevant regulatory framework**.

4.2. Instruments for supporting the uptake of PPP in Cohesion Policy

4.2.1. Regulatory changes at the EU level

In spite of receiving increased policy support, the blended model combining the PPP procurement and Cohesion Policy resources has not taken off extensively for a number of reasons. Partly this has occurred because of regulatory constraints and lack of certainty in practical implementation procedures. As often indicated in the course of our interviews, the lack of PPP-specific provisions was considered to be a significant constraint to a more extensive use of PPP in the delivery of Cohesion Policy objectives. For instance, private participation in blended operations generally needed to be arranged in line with the grant approval and disbursement mechanisms which were originally created in the context of conventional forms of public works procurement.

The coordination between the PPP procurement procedure and the process of grant application, approval and disbursement process proved to be particularly challenging in relation to the following requirements:

- **The private partner had to be selected before the grant application and the possibility of changing it during the implementation phase was not envisioned** in the regulatory framework. This actually led to a significant risk for procuring authorities, who could find themselves having to guarantee the availability

of funding in the event that the grant from the ESI Funds was not approved or reduced compared to the amount foreseen in the application.

- **The grant had to be disbursed within two years of the planned expenditure and within two years of the end of the OP**, at the latest ("de-commitment rule"). These requirements were not well suited to accommodate certain PPP structures, where payments are made over the much longer-term service delivery period, as is typically the case where the remuneration of the private party is based on availability payments.
- **Grants had to be paid to cover upfront capital expenditure costs and against evidence that such costs are incurred**. This was found to limit the full benefits of a PPP as a procurement tool that links payment to long-term service performance.
- **The grant amount determined for revenue generating projects was based on projections** (basing on funding gap approach) **entailing some risk of recalculation**. This uncertainty in relation to the amount of Cohesion Policy funding created further uncertainty for the PPP private partners.

Box 8: How past ERDF/CF regulations limited the use of PPP in co-financed projects

Poznań Energy from Waste Plant PPP (Poland). The project benefited from a CF grant of EUR 82 million, corresponding to approximately 45% of the investment cost. The hybrid financing route posed practical problems, as an EU grant for such a large infrastructure project had to be approved by the EC, which was time-consuming (the co-financing agreement was signed in 2011, the PPP agreement with SUEZ ZE was signed in 2013, and the EC decision on grant approval for the project was given only in early 2015). Because of regulatory restrictions, the PPP procurement and the CF application had to run in parallel. As the city of Poznań was not in a position to provide financial backstopping for the project, and the timing and final amount of the EU grant was uncertain before signing the PPP contract, the financial risk was transferred to the private partner employing a DBFO model. The bidders were thus required to structure their financial offers on a no-EU grant basis. From the financial backers' perspective, the uncertainty of the CF availability was not problematic and did not impact on the risk profile of the operation, but the debt exposure of the borrower was higher without factoring in the CF grant.

When the CF grant became available, SITA ZE, the project SPV, cancelled part of its financing, and it was refunded by the city for some of its construction costs. The channelling of the CF grant did not require any re-negotiation of the PPP contract, as the contract had already a provision (by way of the financial model) for adjusting all the relevant financial parameters. The payment schedule to the construction contractor was in no way affected by the availability the CF, which could have potentially derailed the construction schedule, as SITA ZE had decided since the project outset to rely on an independent financing stream, and to recover its costs from the city only afterwards. This arrangement lowered both final investment cost for the city and local taxpayers and the availability payments from the public partner to the private partner, thereby reducing the cost of waste processing for the local residents. It is important to notice that this flexibility was also made possible by the PPP model pursued, a DBFO contract with availability payment. In this scheme, the demand risk is entirely with the public actor and is one of the reason that kept the risk profile of the operation unchanged from the point of view of the commercial lenders.

Source: Annex 3.4

Building on the past blending experience, **the new provisions included in the CPR bring about improvements to a number of regulatory constraints that generated an excessive risk burden for MAs engaged in PPP operations**. These mostly relate to the i) designation of the beneficiary of the EU support, ii) timing of ESIF grant disbursements and iii) requirements on contract termination and audit trail.

Beneficiary of ESI Funds for blended projects. During the previous programming period, the grant beneficiary, which could be either a public or a private sector body, had to be clearly identified before the approval of the operation. This obliged the contracting authorities to guarantee the availability of funds without knowing if the ERDF/CF would have been approved. In revenue generating projects, uncertainty concerning the establishment of the grant amount added further complexity and risks[40].

In this respect, Art 63.2 of **the CPR allows the public authority initiating the PPP operation to propose a private partner as beneficiary of ESIF resources also in cases where the private partner is selected after the approval of the operation**. In this case, the approval of the operation is conditional on the public authority "*satisfying itself that the selected private partner fulfils and assumes all the corresponding obligations of a beneficiary* ". This provision should bring about advantages in terms of flexibility in timing and risk mitigation for both the public and the private party. First, the public authority can proceed with the request of the EU grant in parallel with and prior to completing the PPP procurement procedures. Second, the public authority is no longer exposed to commit to a PPP agreement before the grant amount is known.

Of course, once selected, the private partner should agree to undertake the corresponding obligations and responsibilities of a grant beneficiary (e.g. submission of payment requests, proof of eligible expenditure, regular reporting). **Another option introduced by the CPR is the possibility of replacing the private or the public partner beneficiary during the implementation of the project**, under certain conditions, namely: i) where this is required under the terms and conditions of the PPP agreement between the public and the private partner, or ii) where this is foreseen in the terms and conditions of the financing agreement between the private partner and the financial institution co-financing the operation. In this case, the MA must verify that the replacement of the beneficiary fulfils all the obligations of the previous one[41]. In this regard, the Commission Delegated Regulation N. 2015/1076 (hereafter PPP DR) has introduced additional conditions that should be met when replacing the beneficiary[42].

Timing of ESIF grant disbursements in blended projects. A further constraint for blending projects in previous programming periods related to the "de-commitment rule", known also as N+2 rule, according to which EU grants have to be disbursed within two years of planned expenditure and within two years of the end of the OP at the latest. These requirements were not suitable to accommodate PPP structures where payments are usually made over a much longer-term service delivery period. Under this requirement, grants could have been used only to pay for up-front capital costs, thus limiting the full benefits of a PPP as a procurement tool that links payment to long-term service performance.

[40] See the Poznań Energy from Waste Plant PPP case study for an illustration of this mechanism.
[41] Art 63.3 of the Council Regulation (EC) No. 1303/2017.
[42] Specifically, the replacement of the private partners (as referred in Art 63(3) of the CPR) shall ensure that: a) the partner or body is able to provide at least the service, including at least the minimum quality standards, determined in the PPP contract; b) the partner or body has agreed to assume the rights and responsibilities of a beneficiary in relation to the support for PPP operations from the date on which the MA is notified of the replacement proposal.

The CPR also contains "de-commitment" provisions[43] according to which the Commission may de-commit amounts from the OP if the payment of the grant does not take place within three years of the budgeted commitment, referred as N+3 rule, and within 31 December 2023 at latest. **However, the CPR allows for some flexibilities to this rule in the cases of blended PPP projects**.

The disbursement of the EU funds is not directly addressed to the private partner but it works through the so called "*escrow account*" which is set up for the purpose of the project "*in the name of the beneficiary*" and is controlled by the procuring authority[44]. The criteria according to which the bank providing the escrow account has been selected should be clearly indicated in the partnership agreement[45]. Following the usual grant disbursement rules, the procuring authority submits payment claims to the MA based on the actual eligible expenditures by the private partner. On the basis of these payment claims, the grant amount is disbursed into the escrow account managed by the procuring authority. Payments to the private sector are made by the escrow account in accordance to the schedules agreed as part of the PPP agreement, even if it takes longer than the N+3 rules. In any event, the expenditure of the private partner, which triggers the grant disbursement to the escrow account, should be incurred and paid not later than 31 December 2023. Moreover, the asset financed through the PPP should be completed and operational by the final closure of the 2014-2020 OP (which means by February 15, 2025 at latest) (EPEC, 2016a).

Requirements on contract termination and audit trail. According to Art 5 of the Commission Delegated Regulation N. 2015/1076, the PPP agreement shall contain provisions on the establishment of a reporting and retention mechanism, including the same obligations of the beneficiary. Moreover, the PPP agreement shall include procedures to ensure the adequate audit trail.

4.2.2. EIB and EC support for blending

Since the early 2000s, the role of the EIB Group[46] in Cohesion Policy has progressively expanded and the coordination with Cohesion Policy supported initiatives has been stepped up. **The introduction of FIs in Cohesion Policy has been one of the factors leading to this increasing involvement**. Already used to deliver ERDF in some MS during 1994-1999 in the SME sector, FIs became more widespread during 2007-2013, with their area of application extended from SMEs to sustainable urban development and energy efficiency in buildings (EC, 2016). Their scope was further widened to all ESIF and all thematic objectives in 2014-2020. In addition to the reinforcement of FIs supported by budget resources under shared management, a significant increase of the use of financial instruments supported by central budgetary resources in achieving EU objectives has been set out in the Investment Plan for Europe launched in 2014 and known as the Juncker Plan.

The current programming period will likely see a deeper and wider engagement of the EIB in Cohesion Policy implementation, given that FIs scope has been enlarged to all thematic areas and the creation of the EFSI. The current Cohesion Policy legislative framework includes provisions for the involvement of the EIB in the consultation

[43] Articles 86 and 136 of the Council Regulation (EC) No. 1303/2013.
[44] Art 64 of the Council Regulation (EC) No. 1303/2013.
[45] Additional requirements to be included in the PPP agreement in relation to the escrow account are laid down in Art 4 of the Commission Delegated Regulation (EU) No 2015/1076.
[46] The EIB Group consists of the European Investment Bank (EIB) and the European Investment Fund (EIF), which is the arm of the EIB Group dedicated to provide innovative financing for SMEs in Europe. The EIF is majority-owned by the EIB.

process[47] leading to the development of Partnership Agreements between the EC and the MS and the definition of ESIF supported OPs. This also extends to activities relating to the preparation of operations, in particular major projects, and PPPs (EPRC, 2016). **With respect to promoting the combination of PPP and Cohesion resources, the EIB has played two key roles: provision of advisory and technical assistance services and direct** (e.g. co-financing of Cohesion Policy projects) **or indirect** (e.g. mandate to manage ESIF-supported holding funds**) financial support** (Table 7).

Table 7: EIB initiatives that are relevant for the use of PPP in Cohesion Policy

INSTRUMENT	ILLUSTRATIONS	PPP OPERATIONS
Investment Loans **Direct loan for a specific investment project or investment programme, usually well above EUR 50m**	Loan to a major project Loan to a multi-scheme project or programme	A major project can be delivered as PPP
Framework Loans **Loan for investments meeting pre-defined criteria but not known ex-ante**	Framework loan to a MA to finance a regional OP	Some of the final beneficiaries can be PPP operations
Global Loans **Credit lines to banks**	Multi-purpose credit lines to financial intermediaries	Some of the final beneficiaries can be PPP operations
Investment Funds **Investor in a fund**	Investment into a fund with European interest objectives (e.g. EEEF, Marguerite)	Some of the operations supported by the investment fund can be PPPs
Investment Funds **Management Services**	Acting as Fund of Funds (Holding Fund) manager	Some of the FIs set up via a FoF can support PPP operations
Advisory Services	Project / fund structuring advisory services (e.g. ELENA, JASPERS, JESSICA, fi-compass)	Some of the instruments and vehicles set up as a result of advisory work can be PPPs or support to PPP operations

Source: Authors' elaboration based on EIB presentations

Advisory services

Given the complex nature of PPPs, advisory support on legal, financial and technical aspects is most of the time necessary and usually comes from sources external to those internally available to the MAs. Only in exceptional cases a procuring authority has some of these capabilities in-house (e.g. Rijkswaterstaat in the Netherlands). **Standardisation** at national and programme level **can work well in improving the quality of PPP contracts and reducing the implementation timeline, but is limited by the fact that most PPPs**, especially for large projects, **are required to be developed through ad-hoc contracts**. Furthermore, even when these standard contracts exist, the procuring authority still usually needs access to specialist legal, financial and technical input. Ample capacity and skills are generally available in the market for advisory services, **but the**

[47] The role of the EIB is spelled out in Art. 31 of CPR (1): "The EIB may, at the request of MS, participate in the preparation of the Partnership Agreement, as well as in activities relating to the preparation of operations, in particular major projects, financial instruments and PPPs."

public sector often does not know how to use effectively PPP preparation and transaction advisory services to maximise policy impact and conduct high-quality VfM leading to sound project preparation and procurement.

While, as a general rule, the first port of call for all authorities in need of external advisory support is the market for advisory services, both international and local, these services can also be complemented with technical assistance and knowledge support provided at the EU level. Some of this support is delivered by the EIB Group, often operating in cooperation with the EC, other International Financial Institutions and national development banks. **The EIB has established in 2014 an advisory services department to coordinate the many advisory activities that the Group has delivered over the years in an informal and relatively fragmented way**[48]. A recent example of this development is the prominent EIB role in relation to the implementation and management of a European Investment Advisory Hub (EIAH) established in the context of the Juncker Plan to support EFSI investment, which can be accessed by interested parties. **The EIB does not provide dedicated advisory instruments specifically aimed at supporting the combination of ESIF with PPP**. However, **certain services are of potential interest to authorities considering the combination of ESIF resources and PPPs. These have been rather mobilised upon specific requests of MS and consist in tailored technical assistance schemes**. Two advisory services are available, EPEC and JASPERS, according to the following division of roles: **EPEC explains blending mechanisms to MA and support public authorities in finding the right advisers, while JASPERS focus its support on projects in the context of the implementation of OPs**. **Collaboration between JASPERS and EPEC takes place on ad-hoc basis**, exploiting the fact that the two types of expertise complement each other. For instance, in 2010 EPEC provided inputs during the preparation of the JASPERS guide on "*Combining EU grant funding with PPP for infrastructure*". More recently, in 2016 the JASPERS Networking Platform and EPEC jointly organized a seminar on "*Blending ESIF grants and PPPs*". EPEC can also support JASPERS projects, in close cooperation with JASPERS and often in relation to PPP-specific technical issues related to combining EU grants and loans in a PPP.

EPEC is the main EIB advisory tool dedicated to capacity building and promoting good practice in PPPs. It is a membership-based network of PPP units and public policy makers. It has been established as an EIB initiative, which also sees the involvement of the EC, MS and Candidate Countries. The EPEC mission is to strengthen the ability of the public sector to engage in PPP transactions. To this end, the EPEC shares and promotes good PPP practice, assists PPP policy development and supports the preparation of PPPs. The EPEC should be seen as a PPP knowledge centre and does not advise on specific PPP projects. Its support is geared towards improving the institutional and policy environment for PPPs (e.g. set up a PPP programme, carry out PPP regulation assessment) at European level, for example through guidelines such as the guide clarifying the statistical treatment of PPPs, or at MS level. The EPEC does not have a mandate for promoting the combination of ESIF with PPP, but in 2016 it issued a guidance note on "*Blending EU Structural and Investment Funds an PPPs in the 2014-2020 Programming Period*" to highlight legislative changes in the current programming period that facilitate the combination of PPP and ESIF resources. In the view of people interviewed under this study, the EPEC support is useful for helping MAs adapting projects to meet constraints from EU regulatory framework, including for projects financed by Cohesion Policy.

[48] The concept of advisory services work in the context of the EIB's "lending, blending and advising" activities is presented for instance in http://www.eib.org/products/advising/.

JASPERS (Joint Assistance to Support Projects in European Regions) **is a technical assistance initiative** jointly supported by the EC, which provides the necessary funding, the EIB and the EBRD. JASPERS was **established in 2006 to address the problem of under-absorption of EU funds**, which was linked to lack of administrative capacity in MS to plan and implement big investment projects to be co-financed under the Cohesion Policy (e.g. need to comply with EU environmental, State aid or procurement regulations). **JASPERS aim is to support MS in developing a robust project pipeline** for the purpose of increasing project quality and the speed of absorption of EU funds, principally Cohesion Policy resources. In this respect, projects that qualify for JASPERS assistance potentially cover all Cohesion Policy Thematic Objectives, but JASPERS focus is mostly on major projects (e.g. transport and environmental infrastructures). Amongst the services provided by JASPERS is the support to project implementation through advice on project design, environmental obligations and procurement strategies, which can also include PPP schemes. However, in this respect, **JASPERS does not have a specific role as a facilitator of PPP**.

JESSICA (Joint European Support for Sustainable Investment in City Areas) and **fi-compass. JESSICA was a technical assistance initiative of the EC developed in 2007-2013** in co-operation with the EIB and the Council of Europe Development Bank **to support sustainable urban development and regeneration through financial engineering mechanisms** (equity, loans and guarantees). Technical assistance provided in the framework of the JESSICA initiative supported MS interested in the possibility of establishing Urban Development Funds (UDFs) by providing tailored advisory services and feasibility studies. As a potential follow-up of JESSICA technical assistance, MAs intending to establish UDFs could decide to employ the services of the EIB as a holding fund manager, and delegate to the EIB the task of selecting the manager of the specific funds and act as a holding fund. Following up on the experience matured in 2007-2013, **in the 2014-2020 programming period a successor technical assistance initiative was launched by the EC**, in cooperation with the EIB, to assist MS interested in developing FIs. **This is the fi-compass platform**, launched in 2014, designed to "*support ESIF managing authorities … and other interested parties, by providing practical know-how and learning tools on financial instruments*".[49] **The fi-compass platform has a far wider scope than JESSICA, as it covers FIs under all Thematic Objectives and is supported by all ESIF**[50].

ELENA (European Local Energy Assistance) is a joint initiative by the EIB and the EC, **providing grants for technical assistance focused on the implementation of energy efficiency, renewable energy and green urban transport projects and programmes**. ELENA provides financing to support project development. ELENA grants can be used to finance feasibility and market studies, contractual arrangements, tender procedures and business plans. **ELENA support is relevant for small medium scale PPPs in the following areas: public and private buildings, integration of renewable energy sources into the built environment, district heating/cooling networks, energy-efficient urban transport and local infrastructure.** The programme is not focused on PPP specifically, but it recognises PPP as a possible procurement method. ELENA assistance is not necessarily linked to the use of ERDF/CF resources, but can assist the development of economically and financially viable local energy projects that can employ those resources in PPP operations.

[49] Quotation from the fi-compass home page https://www.fi-compass.eu/.

[50] Fi-compass also covers financial instruments funded by the EAsI (Employment and Social Innovation) Programme, aimed at increasing access to finance for vulnerable groups, micro- and social enterprises through micro-credit.

Financial Instruments

The EIB has set up an array of financial instruments that can be used to facilitate the financial close of PPP projects. These instruments are generally **set to address market failures and to modify the risk profile of investments by creating more favourable conditions for private investors and debt providers**. To put it simple, EIB support is delivered to address PPP projects' bankability issues. **These instruments also aim at reversing the declining trend in PPPs that occurred after the financial and economic crisis** (Zaharioaie, 2012). Some of these instruments, like those promoted through JESSICA, have been specifically designed to be integrated in Cohesion Policy, while others support investments that complement the objectives of Cohesion Policy, but do not necessarily fall under the Cohesion Policy thematic priorities.

Within the context of Cohesion Policy, according to a report of the European Court of Auditors (ECA) concerning the implementation of FIs in the programming period 2007-2013[51], **FIs were not as successful as expected in attracting private capital in both shared and central management systems**. As far as shared management FIs are concerned, the ECA study estimated that private contributions to the capital endowment of ERDF and ESF FIs accounted for around 2% of the total. The private sector was generally discouraged from engaging in these projects by the need to comply with strict regulations that encompass EU, national, public procurement and state aid rules. Specific leverage targets were not specified in the funding agreements between MAs and fund managers, which lacked of incentives for attracting private investors (ECA, 2016).

JESSICA as a financial instrument. In the 2007-2013 programming period, contributions from the ERDF were allocated to UDFs to be invested in sustainable urban development projects promoted through the JESSICA technical assistance initiative. Unlike traditional Cohesion Policy support, which is based on the provision of grants, **these investments could take the form of equity, loans and/or guarantees**. UDFs promoted by JESSICA sought to establish revolving funds, so that the returns from investing resources from Cohesion Policy could be reinvested in new urban development projects. FIs promoted by JESSICA were designed to mobilize additional financial resources, including for PPPs, and the focus on investing in PPPs "*part of integrated plans for sustainable urban development*" was specifically mentioned in the 2007-2013 regulatory framework. **In a PPP, the value added of FI is that they may offer more flexibility than the grant instrument in blending Cohesion Policy resources with other sources of funds**. A JESSICA FI can adapt the type of financial product – equity, quasi-equity, loan, guarantee – to the specific needs of the project, or, as the case may be, of the PPP being funded. For instance, a FI can provide a subordinate funding between the equity and bank loans, reducing thus the financial exposure of the private borrower and increasing the attractiveness of projects for commercial lenders (Republic of Croatia, 2013). As already noted, in 2014-2020 the scope of activity for FIs is much wider than in 2007-2013. UDF-type FIs focusing on urban investment can still be established, without the requirement that projects should be part of an integrated plan for sustainable urban development.

LGTT (Loan Guarantee Instrument for Trans-European Transport Network) was established jointly by the EC and the EIB in 2008. Its objective is to **reduce demand risk in large transport project** (TEN-T) **to facilitate participation of the private sector**. Specifically, if the revenue from the project is lower than the forecasted levels during the first 5 to 7 years

[51] The audit examined whether financial instruments were an efficient mechanism to implement the EU budget in the 2007-2013 programming period. The analysis covered all ERDF and ESF financial instruments set up during 2007-2013 under shared management, as well as six centrally managed financial instruments.

of operation, the project provider can use the EIB guarantee that is provided in the form of a contingent credit line. An evaluation of the LGTT used during the period 2008-2012, found out that LGTT "*has had a positive impact where it has been applied, but not a sufficient effect to achieve its broader objectives".* In particular LGTT were reported to help projects reach the financial close and to have a general credit enhancement effect, but its impact on increasing the attractiveness of demand-based transport is uncertain (Ramboll, 2014).

Marguerite 2020 Fund was established in 2009 and is **a pan-European equity fund for capital intensive infrastructure projects to support EU policy objectives in the areas of transport, energy, climate and renewables**. The fund promoters are leading European public finance institutions including the EIB, Caisse des Dépôts et Consignations (France), Cassa Depositi e Prestiti (Italy), Kreditanstalt für Wiederaufbau (Germany), Instituto de Credito Oficial (Spain), and Powszechna Kasa Oszędności (Poland). Each of the six core sponsors committed EUR 100 million to the Fund. Subsequently, three further investors, including the EC have committed an additional EUR 110 million to the Fund, bringing current commitments to EUR 710 million. Since its establishment the Marguerite Fund has supported a number of PPP projects, including the N17/N18 Motorway in Ireland (TEN-T project), Poznań energy-from-waste in Poland (a CF supported project) an optical fibre project in the French region of Alsace and the Autovía de Arlanzon (A-1) Motorway in Spain[52]. **By investing in projects, the Marguerite Fund has changed the risk perception of private investors and debt providers, enabling PPPs that would have not necessarily happened without its involvement** (Norton Rose Fulbright, 2014).

EFSI is one of the three pillars of the Investment Plan for Europe and **aims to kick-start long-term investments in a variety of sectors including infrastructure, research and innovation, education, renewable energy and energy efficiency, as well as risk finance for SMEs**. EFSI is managed by the EIB and consists of a contractual arrangement between the EC, which provides an EU guarantee of EUR 16 billion, and the EIB, which provides its own capital contribution of EUR 5 billion. Up to 2016, about 250 transactions were approved under EFSI, which has been successful in crowding in additional finance from the private sector, which accounted to 85% of the total investment mobilized (EC, 2016a). **EFSI support is well-designed to be blended in a PPP arrangement**. Firstly, EFSI can be delivered alongside support from private investors and financial intermediaries. Secondly, it includes an infrastructure window with a large sector outreach. Finally, EFSI guarantee aims at supporting projects with a higher risk profile. Combination of EFSI and ESIF is promoted by the EC under the current programming period and is possible either at individual project or at financial instrument level. EFSI can also provide support for parts of projects which are not eligible under an OP (EC, 2016b). Like ESIF, EFSI has a broad scope of sector application. However, its policy focus is on promoting innovation and employment in the aftermath of the financial crisis, without differentiating its interventions between more developed and less developed regions.

The Project Bond Initiative was launched in 2012 as a joint initiative of the EC and the EIB. It **aims at stimulating capital market financing for large-scale infrastructure projects in the sectors of transport, energy and information and communication technology**. In PPP projects, under this initiative, EU funds can be used for credit enhancement to attract additional private finance from institutional investors, such as insurance companies and pension funds. The Project Bond Initiative mechanism split the debt of the project company in two tranches: a senior and a subordinated part, which can be

[52] The complete project list is available on the Marguerite Fund web site http://www.marguerite.com/fund-overview/investments/

provided in the form of loan or guarantee. The EIB provides the subordinated debt, enabling the sponsors to raise senior bonds at a lower rate and reducing thus the investment risk. **As compared to traditional bank loans backing PPP arrangements, project bonds can offer a longer tenor, higher funding capacity and lower interest rates, but are less flexible and subject to more rigid market standards**. An evaluation of the pilot phase concluded that the initiative is clearly needed by the market and that it should continue to operate, while increasing its strategic focus on projects with highest EU added value (EC, 2016c).

4.2.3. Support measures for PPPs in Member States

In order to promote the use of PPPs in the delivery of public services, **many MS have carried out institutional and administrative reforms aimed at establishing an enabling legislation for PPP and PPP supporting institutions**. The establishment of specialized PPP units has been often a key factor in ensuring that PPPs are anchored to a sound legislative framework, and, in some cases, have been instrumental to place the use of PPPs into the wider context of a national investment strategy. Establishing a specialized unit within governments can also help support every stage of the PPP project cycle from project appraisal and approval to project monitoring. A review carried out by EPEC in 2014 found out that 18 of the 24 EPEC members have established some sort of centralized unit for promoting the use of PPPs. These units generally carry out a combination of the following functions: i) PPP policy support and related activities, ii) programme and project delivery support, and iii) approval and quality control. These units can be established either as independent agencies (e.g. Croatia, Ireland, Germany) or within existing ministries, generally the finance ministry (e.g. France, Italy) (EPEC, 2014).

However, the form and function of PPP units in European countries varies widely in response to differences in countries' policy and administrative context. In particular, national PPP development depends, among other things, on fiscal constraints, political commitment, public perception and the presence of a supportive legal framework. Their performance and centrality in the policy process may also vary greatly. Three different approaches can be broadly identified (van den Hurk, 2014).

- **A pragmatic/opportunistic approach**, in countries where PPP units have not been established (e.g. Finland, Austria, Czech Republic) or where PPP units have been established for a short period, when these were needed for the implementation of specific projects. In this category, Finland is a particularly interesting case because several PPP projects have been implemented without a PPP supporting unit. The decision on the most appropriate procurement route is rather based on rigorous standardized cost–benefit analysis, which has been in use for several decades. At the other end of the spectrum, the Czech government created a relatively sound PPP-supporting unit when PPP was seen as an attractive solution for bridging the capital investment gap. Despite major political parties remained pro-PPP, the PPP unit was side-lined and eventually dismantled with negative consequences for the government attempts to implementing PPPs.
- **A structural approach based on centralized support** to the development of a national PPP market. This is the most common approach. Within this category, an evolving approach is found in very mature PPP markets, such and the UK and the Netherlands. In these countries PPP support structures underwent several restructuring phases, showing a continuous adaptation to a changing PPP market.
- **An integrated approach based on building PPP competences within relevant ministries**. In Poland, where a central PPP unit does not exist, PPP functions have

been assigned to the Ministry of Economy, that is responsible for establishing the legal framework, and the Ministry of Infrastructure and Development, that is responsible, amongst other things, for providing guidance on hybrid PPPs that blend EU funds and private financing. In Spain, PPPs have been applied with the support of regional PPP units or units established in a rather fragmented environment.

The provision of support specifically related to the use of PPPs in combination with ERDF/CF is a more specific activity that is not pursued in all MS. For more developed regions the availability of these services is less needed and relevant because in those regions ESIF resources are targeted to sectors where PPPs are not traditionally used. Investment in social infrastructure, which is a priority for many developed regions with an ageing population, are often out of the scope of regional OPs. Countries eligible to receive CF support[53] have a wider scope to support PPP projects through European funds, given that the EUR 63.4 billion available for the 2014-2020 programming period are earmarked for two sectors (trans-European transport networks and environment) where there is a long tradition of PPP projects. **Amongst the countries that benefit from CF, Poland, Croatia and Greece stand out for their proactive support for leveraging Cohesion resources in PPP projects**. Their approach is briefly described in the rest of this section.

Poland - The PPP Institute, an NGO established in 2003, was the first organisation in Poland to focus on developing PPP projects. The Institute has been helping both public and private partners in preparing and implementing PPP projects by providing technical, legal, and economic advisory services. The Institute does not have a specific mandate to promote hybrid PPP projects (i.e. those combining Cohesion Policy resources and other sources of funding). However, the PPP Platform, set up by the Ministry for Development in 2013, is a major government conduit that provides comprehensive support for PPP projects in Poland. A PPP database has been set up and PPP training offered to local authorities and other stakeholders, with some 113 projects carried out by local authorities so far. PPPs in Poland span various sectors and projects, including roads, parking infrastructure, hospitals, museums, and tourism. **The main reasons for using PPPs include: gaining access to additional financial resources, achieving investments off-balance sheet without breaching public debt limits, delivering projects faster** (i.e. savings achieved through project integration), **know-how acquisition, and transfer of economic risks**.

Whilst the Platform does not have a specific mandate to promote hybrid PPPs, it does include several documents that highlight the importance of using EU funds in PPP projects over the current 2014-2020 programming period. **The key reasons for considering PPP increasingly important in delivering Cohesion Policy objectives are the projected fall in investments financed by the public sector, the difficult financial situation of local governments and their limited capacity to debt-fund their own contributions to co-financed projects in the new financial perspective**. It could be assumed that PPP projects involving EU funds will be mainly implemented in sectors such as environmental protection (especially waste management), urban regeneration (selected elements of complex actions), ICT, transport, and energy efficiency (Kałuża, 2014).

Given the above, there are clearly high expectations by the Ministry for Development that hybrid PPP project will be taken up by local governments and private partners in the 2014-2020 programming period. The first hybrid PPP project in Poland (value EUR 13.21 million) was signed last February by the City of Zgierz to finance an energy efficiency project for

[53] For the 2014-2020 period, include Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia and Slovenia.

thermal retrofitting of 24 educational facilities, covering kindergarten, nursery, primary, middle and high schools, and a swimming pool.

Croatia - The Public Private Partnership Act (OG 78/12) established the Agency for Public Private Partnership as the central national authority and knowledge centre in charge for appraising, approving and monitoring the implementation of PPP projects, keeping a register of PPP contracts, and applying international best practices in the field of PPP. According to the Agency, **the use of PPPs can support a more efficient use of the ESIF allocations and ultimately translate into higher economic activity and growth**. In particular, the expected benefits of implementing hybrid projects are multiple and consists in:

- Achieving a wider involvement of private partners (and capital) in co-financed projects, which is also an objective of Cohesion Policy;
- Increasing the volume of public investment without increasing public debt, due to the off-balance sheet treatment of certain PPPs (if the Eurostat criteria are met), and without increasing public deficit, if the PPP model achieves a lower life-cycle service delivery cost as compared to the traditional model;
- **Achieving higher EU fund absorption** as PPP projects tend to be well prepared and even medium-sized PPP projects can be grouped in multiple-project tenders;
- Increasing domestic capacity in both public and private sector to prepare and participate in complex projects;
- Supporting the development of a domestic private equity market that is chronically lacking in Croatia; and
- Increasing financial leverage of EU funds by combining grants and financial instruments.

The Agency has been very proactive in supporting hybrid projects, although the uptake has been very limited thus far. The first manual on combined financing was published in 2013, but the handbook only provided concepts and a possibility for combining the EU funds with PPP. Following a six-month EU technical assistance[54], more operational and detailed procedures for combining grants and PPP financial instruments have been defined. Two new initiatives are being implemented: i) drawing up national calculation and VfM measurement procedures (not exclusively for PPP projects), and ii) developing publicly accessible forms of PPP contracts, public sector comparators and private partner procurement documentation. The Agency expects that these projects will make the PPP model more accessible to all central and local public contracting authorities as well as to private investors and that a larger number of projects that combine EU grants, financial instruments and private capital, within PPP will materialise. For the current programming period, a procedure for combining ESIF with the PPP model has been defined for street lighting and energy efficiency projects, where PPP projects are funded by EBRD extended energy efficiency loans with a favourable interest rate and by EU grants covering 15% of project cost.

Greece - Since 1993, three pioneering projects[55] have paved the way for the uptake of PPPs in delivering large infrastructure projects in Greece. In the early PPP operations, the decision to enter into a PPP contract was subject to individual parliamentary approval. In 2005 the

[54] Instruments for Combining EU Structural and Investment funds with PPP funded by IPA funds

[55] These are: Rion Antirion Bridge, Athens Ring Road/Attiki Odos and Athens International Airport. The Athens International Airport is introduced in Box 4 and presented in more detail as one of the case studies in Annex 4.

process was streamlined through the approval of a framework law guiding the design, funding and implementation of PPPs (Law 3389/2005). The law established a clear-cut framework for speeding up the approval of PPP projects, centralising decisions within the Inter-Ministerial Committee for PPPs, the governmental body setting up the general policy for PPPs and approving PPP projects. A Special Secretariat for PPPs was also set up to facilitate and administer projects. Its tasks include the identification of new PPP projects coherent with the PPP policy, the appraisal of proposals submitted by public entities, the promotion of the Partnership framework, the facilitation and support of public entities in promoting and implementing PPP projects, and the monitoring the implementation of Partnership Contracts.

Three **conditions have made of Greece a pioneer country in exploring the possibility of using different innovative financing structures such as blending private capital, EIB finance, EU structural funds, and financial engineering instruments**. These were, and still are, **the need to bridge a large infrastructure gap**; **a relatively high level of EU grant funding available,** and, finally, **severe fiscal constraints** particularly in the aftermath of the financial crisis. These conditions, coupled with a generally poor historical performance in delivering infrastructure projects through traditional procurement (typically very long construction delays) have succeeded in increasing the use of European funds within PPP projects. This, in addition to the significant experience already accumulated with pioneering blended PPPs, has allowed Greece, **unlike other MS, to mainstream and make more systematic the combination of ERDF/CF with an already developed PPP project pipeline**. Between 2009 and 2017, 12 PPP contracts that combine EU funding with domestic public and private resources have been signed for an investment amount of EUR 633 million (Table 8).

Table 8: Signed PPP contracts that blend an EU grant or loan within a PPP contract in Greece, 2014-2015

PROJECT	EU FUNDING		
	EIB	JESSICA	EU GRANT
7 Fire Stations (approved in 2009)	□		
14 school buildings in Attica	□	□	
10 school buildings in Attica	□	□	
Telematics system (Athens Urban Transportation)		□	□
Electronic ticket system (Athens Urban Transport)			□
Rural broadband development -lot 1			□
Rural broadband development- lot 2			□
Rural broadband development -lot 3			□
Integrated Waste Management System in the Region of Western Macedonia.	□	□	
Digital recording, archiving and provision of court minutes			□
Integrated Waste Management System in the Region of Epirus			□
Integrated Waste Management System in the Prefecture of Serres			□

Source: Special Secretariat for Public-Private Partnerships

In the view of Greek public officials, such an ambitious public investment programme could not have been be financed without the support of ERDF/CF in spite of an increased use of

private capitals through the PPP model. In the aftermath of Greece sovereign crisis, when the availability of commercial bank financing collapsed, **ERDF/CF have also played a key role in restoring economics of existing PPP projects by establishing minimum requirements to mobilize private equity and loans**. This was for instance the case of the 24 Schools PPP Project where JESSICA-sponsored Financial Instruments became part of the funding mix and led the sponsors to accept the pre-crisis bid conditions.

However, it is important to note that **the use of PPPs by local authorities is still very limited although the Greek government is trying to promote the use of PPPs for small and medium scale investments** in the areas of urban development, energy and environment. In this respect, political support at the local level will be crucial given that local authorities predominately borrow from the Loans and Consignment Fund rather than exploring the viability of PPPs (Tzortzi, 2017).

4.3. The challenges of combining Cohesion Policy resources with PPP

PPP projects are complex endeavor where the combination of different financing sources is often needed for achieving a balanced distribution of risks. **Many of the difficulties in combining the PPP approach within Cohesion Policy are linked to the fact that the two processes have a different nature and have developed in independent ways**. Data shows that **efforts pursued in simplifying ESI Fund regulations for allowing a wider use of PPPs in Cohesion Policy have not yet brought about the expected results**. This is due to a combination of factors that encompass regulatory challenges and the very perception of the advantage of using PPPs in the delivery of services of general interest.

4.3.1. Issues related to project design

As other projects receiving state support, PPP projects have to comply with State Aid[56] regulations. According to Art 62 of the CPR, ESI Funds may be used to support PPP operations to the extent to which these operations comply with State aid rules as well as public procurement laws (Public Procurement Directive 2014/24/EU and the Concessions Directive 2014/23/EU). Blended projects can give rise to a wide range of State aid issues, which can be grouped in the following categories:

- **Remuneration allocated from the public to the private partner.** A general request which equally applies to all PPP projects, regardless of the sector, is to demonstrate that the price paid by the public authority to the private partner is fair and does not provide an undue advantage. If the public authority is not able to answer this question satisfactorily, then State aid issues and a notification by the EC might be needed. For instance, a land transfer at a sub market prices to private actor or the provision of guarantee might constitute state aid. In the case of guarantee, it is much less likely to constitute State aid if it is part of a contractual package between public authority and private partner selected through a procurement process as the most economically advantageous proposal.
- **Supplementary remuneration from the public to private partner.** It may happen that the procuring authority pay a price to the private partner or grant other advantages for the delivery of non-commercial services, what are called Public Sector

[56] State aid is defined "as any aid granted by a MS or through State resources in any from whatsoever which distorts or threatens to distort the competition by favouring certain undertakings or the production of certain goods in so far as it affects trade between MS [Art 101(1) of the TFEU].

Obligations. These could be payment for the provision of the services (e.g. bus services) in areas where there is no commercial interest (e.g. because of the lack of users). If these payments are overly generous – thus meaning it exceed what is needed to cover the net cost incurred to deliver the services including a "*reasonable profit*" – a state issue can arise.

- **Sector exemptions.** The GBER Commission Regulation (EU) No. 651/2014 sets out 12 areas of investments which are exempted from the requirement of prior notification to the Commission, if these are unlikely to distort competition in the Single Market. For these areas, however, some criteria should be respected regarding eligible beneficiaries, maximum aid intensities (i.e. the maximum proportion of the eligible costs of a project that can benefit from state aid) and eligible expenses. State aid measures which meet the criteria of the Regulation can be implemented by MS directly, without prior Commission approval. Amongst the investment areas which are potentially relevant for PPP projects, there are environmental protection, broadband infrastructures, sports and multifunctional recreational infrastructure. The case of Superfast Cornwall, analysed in the framework of this study, is an example in this regard. Despite the project concerned one of the exempted sector, the total cost of the investment was higher than the limit of EUR 70 million set by the Regulation and the project raised thus a State Aid issue that required notification and approval by the EC.

Beyond compliance with Single Market competition rules, the implementation of blended PPP projects requires the involved parties to deal with and agree upon a number of aspects that are likely to shape the project implementation framework. These include the following elements.

- **Designating the beneficiary of the EU funding**. As mentioned in section 3.1, the CPR allows that both public and private entities can be designated as beneficiary of ERDF/CF grants in a PPP operation (Art. 63 of the CPR). The private partner can be designated as beneficiary also at a later stage (after the grant approval) and can be replaced if needed (Art. 64 of the CPR). As pointed out by the EPEC study (EPEC, 2016a), the decision of the procuring authority to be the grant beneficiary is mostly related to the extent to which it wishes to maintain the control over the payment of the grant to the private partner – for instance in the case of a government-pay PPP – and implement the '*no service, no pay principle*' in relation to the deployment of the grant. In order to avoid any risks for the procuring authority that the grant is not available to meet payment obligations towards the private partner, financial close can take place after the approval of the grant. Also, any risks associated with the timely disbursement of the grant could be mitigated by including provisions in the PPP agreement to cover the private partner's obligations that might cause a delay.
- **Understanding EU grant eligibility requirements relating to PPPs and determine the level of grant that can be applied for**. The parties have to identify the part of the investment which is eligible for the EU co-financing. According to Art. 65 of the CPR, rules on the eligibility of expenditures are determined on national basis, except where specific rules are laid down in the CPR Regulation or the Fund-specific rules. In the case of PPP generating revenues from user charges, these should be taken into account in determining the grant amount in accordance with the rules on revenue-generating projects.
- **Timing of the grant application.** The procuring authority can decide to ask the MA to apply for the grant after the completion of the PPP procurement process or look for

a conditional approval in parallel with the PPP procurement phase. Different reasons may point towards one of the two options (Table 9).

- **Defining the PPP agreements.** The main objective of the agreement is to outline the responsibilities of each party, public and private, and clearly allocate the risk. It should also include rules laying down the establishment and operation of the escrow account (if any) as well as reporting and retention mechanisms.

Table 9: The choice of the timing of the grant application

SCENARIO	STRENGTHS	WEAKNESS
1) Securing grant decision AFTER concluding the PPP agreement	It allows for some flexibility with the timetable of PPP project implementation and overall simplifies since PPP and grant application processes take place separately. It provides certainty at the start of the grant application process on the amount of the grant funding to apply, avoiding thus the risk of having to re-apply for a higher or lower amount.	The procuring authority is committed to funding the amounts due to private actors even if the grant is not approved or is approved for a reduced amount.
2) Securing grant decision BEFORE concluding the PPP agreement	It allows to avoid the risk for the procuring authority with regard to the level or the availability of the grant once entered in the PPP commitment. It allows to reduce the timing for blending process (grant application and PPP procurement run ion parallel). It allows bidders to understand all the sources of financing to plan the bids. It reduces the risk of losing bidders since the grant amount and conditions are known.	The grant amount applied for may be insufficient in light of the actual PPP bids received. Uncertainty on when receiving the conditional grant application in relation to the PPP procurement process (prior or in parallel). This mostly depends on a number of factors, including the expected level of bidder interest, the capacity to run in parallel the two procedures, expected time for grant approval, etc.

Source: Authors based on EPEC, 2016a

4.3.2. Issues related to the country-specific PPP eco-system

At the national level, the existence of a PPP regulatory framework is a precondition for making blended PPP projects happen. PPPs are based on a network of contracts that needs to be developed within a coherent and *ad hoc* national legislation. PPP projects require an effective legal framework, in particular to regulate the ability to use PPP schemes, the procurement process and key contractual provisions. For instance, in Bulgaria, lack of clarity between the scope of application of the PPP Act, enacted in 2012, and the Concessions Act of 2006 impeded PPP uptake in the country (ECSO, 2017). Another source of uncertainty is linked to possible different interpretations of the laws regulating PPP contacts, that can lead

to early contract termination. A notable example is the PPP project of Biarritz Cité de l'Ocean, where a regional administrative court and the French supreme court required the cancellation of the PPP contract, even if this had been endorsed by the MAPPP, the French PPP task force (Annex A.3.6).

Building PPP capabilities in public administration is a long process. PPPs involve complexities at all stages of the project cycle (preparing, procuring, financing and managing performance-based contracts) and require a wide range of skills, some of which may be new to the public sector or difficult to attract and retain in the public sector. In particular, **PPPs require significant preparatory analysis ahead of procurement launch** (e.g. VfM, risk and bankability analysis), which make this option more complex, time consuming and costly, especially when public authorities responsible for developing PPPs are not equipped or unaware of the required skills and resources needed to meet the challenges. Weaknesses in the capacity of authorities to prepare projects can have a significant impact on their deliverability, and, ultimately on the project outcomes. **National PPP units can support MAs, but they do not necessarily have specific competences on combining PPP and ESI Fund**.

An area that is often neglected, and where capacity is weak, is the monitoring of PPP contracts. As assessment of the Italian PPP market shows that, in case of non-performance in projects where the public body corresponds regular payments to the private contractor, penalties are rarely enforced (MEF, 2015). In Portugal, the too early dismantlement of GATTEL, the dedicated agency established within the Ministry of Public Work to oversight and coordinate the construction of the new bridge, is considered to have weakened the negotiating capacity of the public partner, that renegotiated several times the original PPP contract with terms that were too favourable to the private partner (Annex A.3.1).

Erratic political commitments create a too unstable environment, as PPPs are based on long term contracts that need a stable and predictable regulatory framework in order to deliver the expected outcomes. PPPs are often used for implementing large infrastructure projects, which are, by their nature, subject to intense debate and controversies. **PPPs help deliver short-term gains to politicians** (e.g. on time and on budget delivery), **which can create perverse incentives for approving projects on weak analytical basis** (e.g. over-optimistic demand forecast) that can lead to affordability issues for the public sector over the long term. Excessively expensive PPPs project are subject to continuous political pressure that can eventually lead to the termination of the PPP contract, adding a further damage to public finances (see the Biarritz case study in Annex A.3.6).

There are a number of misconceptions about what PPPs are and how they function, which create unrealistic expectations. While the EU has been consistently encouraging the use of more PPPs, and has expanded the offer of financial engineering products that can support PPP projects, within MAs there is still little awareness about how these instruments can be combined with traditional grant-based support (EPC, 2012). Within the EU, the terms PPP also lacks a common legal definition, especially in relation to the different approaches on which a PPP contract can be modelled on.

Country perceptions and national political consensus on the viability of PPP models matter. There has not been yet a large number of blended PPP projects and evidence on outcomes and impacts is scarce, dispersed and not conclusive. For instance, **in countries where positive examples of PPP solutions exist**, such as Greece, **there is a more positive attitude toward the use of PPP models**. In Croatia, where the perception of the

potential benefits of PPPs is positive, public authorities are keen on promoting the PPP approach in projects co-financed by Cohesion Policy. Poland is a somehow intermediate case, with more controversy surrounding the use of PPPs. The "hybrid projects" approach, as the combination of an ERDF/CF grant and a PPP is called in Poland, is well-known and well advanced at the regional and city level. However, the poor reputation of some centrally funded PPPs (e.g. Cracow-Katowice motorway a case of poorly structured concession) have discouraged their use for centrally managed large-scale projects. The same holds for Lithuania, with a limited number of purely PPP projects (more experience instead with concession) which are generally considered as an alternative to EU grants rather than in combination.

4.3.3. Issues related to incentive mechanisms imbedded in ERDF/CF

In Cohesion countries, the availability of ERDF/CF grant can crowd out private sector investments. In some stakeholder views, **PPP and EU funds can be in competition** (Box 9). As long as enough grant resources are available, there will not be enough incentives to resort to alternative sources of finance for building public infrastructure. In the view of some of the people interviewed for this study, public authorities would consider the PPP option only when public funding, either from EU or national sources, is not available.

Box 9: Crowding out in Bulgaria

The Trakia Motorway project is a 116 km two-lane motorway completing the link from Sofia to Karnobat, and thereby to Burgas on the Black Sea. The project is on the TEN-T forming part of the Orient/East-Med Corridor and forms the southern section of the 'backbone' of roads linking Sofia and the Black Sea ports of Burgas and Varna. The first stages of the project were built between 1984 and 2007, while the last section of the motorway was completed in July 2013 and received EURO 430 million from the CF. Although, there was strong initial momentum for the development and execution of this project through the PPP procurement route, the idea was later abandoned (Ramboll, 2014). Delayed decision-making by the Bulgarian government led to the project being postponed, which led to increases in overall project costs. Since the PPP option became unpracticable, the public actor sough funding from the CF and the project was thus implemented through a traditional design and build contract. According to some views, the high dependence of Bulgaria from EU funds for infrastructure project is one of the major obstacles that prevents the uptake of PPPs, because ERDF/CF-funded projects are often a cheaper and quicker alternative. At present, too much focus is dedicated to the timely implementation of the OP for the period 2014-2020, to see much difference in the use of PPPs in medium and large-scale infrastructure project as compared to the previous period (ECSO, 2017).

Source: Author's elaboration from different sources

The evidence on whether a PPP approach is conducive to higher levels of ERDF/CF absorption is not conclusive. The development of a PPP project pipeline, which aggregates multiple projects together, is, in principle, conducive to higher fund absorption. PPP projects that are designed through large consultations and the assistance of qualified experts, also tend to have a superior design quality which facilitates project approval. A notable example in this respect can be found in Greece, where the combination of ERDF/CF in PPP projects has contributed to improve EU fund absorption. However, in the view of most MAs, the use of PPPs complicates the delivery of OPs, as compared to other delivery mechanisms. **The focus on achieving expenditure targets generally does not work in favour of the PPP approach**. Cohesion Policies resources have to be spent along strict financial targets,

which put a lot of pressure on MAs to focus their attention on absorption rates[57]. If countries and regions do not have an already developed PPP project pipeline, and consolidated capacity in managing the PPP project cycle, it is unlikely that MAs consider the PPP procurement route as a way to speed up fund absorption.

4.4. Insights from case studies

For the purpose of this study eight project examples were analysed in depth (Figure 10). Although the choice of different time periods, sectors and project size limit the possibility of a comparative analysis, some common pattern emerge.

Figure 10: The case study mix

90s	2007-2013	2014-2020
•Athens International Airport (EUR 2.2 billion) - CF grant •Tagus Bridge (EUR 897 million) - CF grant	•Superfast Cornwall EUR 153 million) - ERDF grant •Sopot Railway station (EUR 26.7 million) - ERDF loan •Biarritz Cité de L'Ocean (EUR 41 million) - ERDF grant •Poznań EfW plant (EUR 182 million) - CF grant	•Bratislava by-pass D4R7 (EUR 1,066 million) - ESIF loan and EFSI •Treviso Hospital (EUR 250 million) - EFSI

4.4.1. Choice of the PPP model

It is important to differentiate between the decision to follow a PPP approach and the decision to apply a PPP approach for the delivery of Cohesion Policy objectives. The choice of the PPP procurement route, was determined by a combination of factors, and, consistently with the findings of the literature review presented in chapter 2, two drivers for the PPP choice prevailed: **the need to build an infrastructure asset within the shortest possible delay and the need to tap into alternative sources of funding with the constraint of tied public budgets**. In two case studies, the Poznań EfW plant and the Bratislava by-pass D4R7, the fiscal treatment of PPP capital expenditures was reported to be a key factor in favour of the PPP choice.

The choice of the PPP approach in the delivery of the OPs was not part of a broad strategic choice, but was rather determined by the need to address existing constraints, either technical/capacity or financial constraints. Actually, only in Greece the choice to combine ERDF/CF resources in PPPs matured into a more strategic approach that, after the successful implementation of the Athens International Airport PPP project, extended to a larger variety of sectors. In all cases**, the use of Cohesion Policy resources was part of the public sector contribution to the PPP project and it was sought for reducing the financial exposure of the public sector**, even when the share of the ERDF/CF contribution covered a small portion of the total investment cost. Each project was supported by a combination of public (state or local budgets, ERDF/CF) and private (equity and debt) resources (Table 10). The size of the ERDF/CF contribution varied greatly, depending on OP funds availability and compatibility, but also on the revenue generation potential of the

[57] Specifically, under the current programming period the so-called N+3 expenditure target applies, which require MAs to defray, certify and claim expenditures from the Commission within three years of the year in which funds are allocated (EU, 2016)

project. As an example, in the Bratislava by-pass D4R7 project, the government believed that demand for the new road will be high, so to attract sufficiently private investors and partners to the project and to set aside the grant financing option (approximately EUR 50 million).

Table 10: The financing structure in the case studies

PROJECT NAME	FINANCING MIX
Athens International Airport - BOOT	41% from EIB, 26% from Greek public budget, 14% from commercial banks, **10% from the CF**
Tagus Bridge - BOT	**36% from the CF**, 33% from the EIB, 13% from commercial lenders, 13% from the constructor, 6% net revenues from road tools
Superfast Cornwall - (private) DBO	60% from the private partner and **40% from the ERDF**
Poznań EfW plant - DBFO	**45% from the CF**, the remaining from private funds with an equity/debt ratio equivalent to 20/80
Sopot railway station -DBFO	63% from the private contractor, **36.6% ERDF (JESSICA loan),** 0.4% working capital facility
Biarritz Cité de l'Ocean - BOT	46.5% from the constructor, 42.3% combination of public funds from different French administrations, **7.16% from the ERDF** and 4.04% from a commercial lender
Bratislava by-pass D4R7- DFBO	40% from the EIB (debt with EFSI guarantee), 14% from the EBRD (debt), 35.08% from commercial banks (debt), **3% from an ESIF** (loan).
Treviso Hospital - DBFO	50% from Veneto Region (grant, backed by an EIB loan) 18% from the special purpose vehicle, 20% from commercial banks, 11% from EIB (loan to SPV).

In the Treviso Hospital project, the possibility of mobilizing ESIF resources to finance some components of the project was excluded due to the bureaucratic requirements and lengthy procedures that these funds require. Since the construction of the new hospital had been already delayed for several years, the blended PPP project model was considered too risky by the public actor. An EIB loan backed by an EFSI guarantee was deemed more appropriate and feasible.

In a number of cases the contribution of the EIB was determinant for achieving the PPP financial close, as in the case of Athens International Airport, Tagus Bridge, Bratislava by-pass D4R7 and Treviso Hospital. Poznań EfW plant also received an equity investment from the Marguerite Fund, an equity fund established with EIB support.

The evidence collected shows that **the preferred model for the public sector in terms of overall benefits and potential disadvantages is likely to vary depending on circumstance, with the decision on how to structure the PPP driven by project characteristics**. However, the preferred choice seemed to be the joint finance, where the public sector contributes, together with the private sector, to the investment cost. Even when the public sector has not contributed financially to the project, as in the case of the Sopot Railway station, it has provided access to properties and assets owned by the public sector.

The use of availability payment models in sectors that traditionally applied the concession model appeared clearly in the case studies. Examples of this relatively new trend are the Poznań Energy from Waste Plant PPP and the Bratislava by-pass D4R7 PPP, which are included in the case studies presented in this report. A possible reason behind this shifting pattern is that the availability payment model reduces the cost of project financing by making the revenue of the private concessionaire certain, provided that the infrastructure/service is delivered according to the required specifications.

4.4.2. Alignment with Cohesion Policy Objectives and assessment of outcomes

Project alignment with the objectives of the respective OPs are well documented in all case studies. The PPP and ERDF/CF processes run in parallel, implying that the PPPs were not designed to fit in the ERDF/CF programming cycle. In only two cases the projects could not fit with OP eligible expenditures. In Biarritz Cité de L'Ocean project, the ERDF contribution was allocated only to cover eligible components of the project. In Treviso Hospital, the regional authority could have used ESIF grants or loans for financing specific functions of the project, such as energy efficiency and renewal of medical equipment, but this possibility did not materialize.

Assessment of outcomes is mixed, it depends on the time period considered and on the parameters, used for performing such an assessment. In the short-term, the case studies highlight that PPPs are useful instruments to conclude projects on time and on budget (Table 11). The combination of different sources of funding, including ERDF/CF grants, has not affected the projects' implementation phase.

Table 11: Synthesis assessment of outcomes

PROJECT NAME	SHORT-TERM (CONSTRUCTION AND OPENING)	LONG-TERM (OPERATIONAL PHASE)
Athens International Airport	Positive. Works completed on time and on budget.	Positive. Good revenue generator for the public sector. Successful transition from construction to long-term investors is also considered one of the secondary long-term benefits of PPP arrangements in the infrastructure sector.
Tagus Bridge	Positive. Works completed on time and on budget.	Mixed. The capacity of the bridge to resolve traffic congestion problems was questioned. The negative fiscal impact of the project was much larger than expected.
Superfast Cornwall	Positive. Works completed on time and on budget and with the latest available technologies	Positive. Uptake of broadband services in the region was satisfactory and generated gains for businesses.
Poznań EfW plant	Positive. Works completed on time and on budget.	Positive. Self-sustainability of the municipal waste treatment services.

PROJECT NAME	SHORT-TERM (CONSTRUCTION AND OPENING)	LONG-TERM (OPERATIONAL PHASE)
Sopot railway station	Positive. Works completed on time and on budget.	Positive. The objective of transforming a degraded part of the city into a modern and more attractive neighbourhood was achieved.
Biarritz Cité de l'Ocean	Mixed. works completed on time but with a higher budget. The museum site received important architecture awards	Negative. Visitor flows lower than expected, negative impact on public finances, PPP contract terminated.
Bratislava by-pass D4R7	To be seen. Works have just started.	To be seen. Not yet in operation.
Treviso Hospital	To be seen. Works have just started. Early benefits: creation of a social impact investing vehicle	To be seen. Not yet n operation.

Finally, there is evidence of positive cross-fertilization between the complementary use of Cohesion Policy resources and PPPs in major projects. This is due to the fact that the use of ERDF/CF is conditional to meeting a certain number of criteria which generally lead to better project preparation and greater efficiency gains in project implementation and delivery. For instance, in the Tagus bridge project, the involvement of the CF has improved the environmental sustainability of the project. In Poznań EfW plant project, the CF contribution ensured that the project ultimately benefits the citizens of Poznan. At the same time, a well-designed PPP project is more likely to qualify for ERDF/CF financing, provided that the project objectives are aligned with the OP priorities, because of its capacity to leverage private sector financing.

4.4.3. Factors of success (and failure)

Success (and failure) factors refer to the conditions that led to the successful financial close of the PPP contract and, when relevant, to its satisfactory implementation. **Context and project specific conditions, such as the quality of project design and the quality of the relevant PPP regulatory framework, played a key role in all project examples** considered under this study.

The improper allocation of risks, which was related to an overoptimistic forecast of future demand, affected the success of two case studies: Tagus Bridge and Biarritz Cité de l'Ocean. While looking at the case studies' risk-sharing structures (Table 12), some common patterns emerge that are somehow intrinsic to the definition of a PPP contract. Risks related to design, construction and maintenance are consistently transferred to the private partner, whereas the public partner bears most of the legal and regulatory risks, which, in principle, should better control, and the risks related to *force majeure*.

Table 12: Risk allocation in case studies

TYPE OF RISK	MOSTLY PUBLIC	MOSTLY PRIVATE
Design Quality/ suitability of detailed technical design		Athens International Airport, Treviso Hospital, Bratislava by-pass D4R7, Biarritz Cité de l'Ocean, Sopot railway station, Poznań EfW plant, Superfast Cornwall, Tagus bridge
Construction Cost of works and completion timing		Athens International Airport, Treviso Hospital, Bratislava by-pass D4R7, Biarritz Cité de l'Ocean, Sopot railway station, Poznań EfW plant, Superfast Cornwall, Tagus bridge
Maintenance Quality/ cost of asset maintenance		Athens International Airport, Treviso Hospital, Bratislava by-pass D4R7, Biarritz Cité de l'Ocean, Sopot railway station, Poznań EfW plant, Superfast Cornwall, Tagus bridge
Exploitation Quality /cost of asset operation, including availability	Biarritz Cité de l'Ocean	Athens International Airport, Treviso Hospital, Bratislava by-pass D4R7, Sopot railway station, Poznań EfW plant, Superfast Cornwall, Tagus bridge
Commercial/ demand Level of demand and revenue generation capacity	Bratislava by-pass D4R7, Biarritz Cité de l'Ocean, Poznań EfW plant, Tagus bridge (initially, but later compensated by public funds), Treviso Hospital	Athens International Airport, Sopot railway station, Superfast Cornwall.
Financial Ability to meet changes in financial terms (e.g. interest rates)		Athens International Airport, Treviso Hospital, Bratislava by-pass D4R7, Biarritz Cité de l'Ocean, Sopot railway station, Poznań EfW plant, Superfast Cornwall, Tagus bridge
Regulatory Change in legislation	Athens International Airport, Treviso Hospital, Bratislava by-pass D4R7, Biarritz Cité de l'Ocean, Poznań EfW plant, Superfast Cornwall.	Sopot railway station
Force majeure Change in circumstances outside the control of private party (e.g. civil unrest)	Athens International Airport, Treviso Hospital, Bratislava by-pass D4R7, Biarritz Cité de l'Ocean, Poznań EfW plant, Superfast Cornwall, Tagus bridge	

A transition from a concession based model, where the remuneration of the private partner is covered by the revenues generated by the project, to availability payment PPPs is observable in the most case studies. A general rule is that, in revenue generating projects, the commercial and demand risk is transferred to the private partner. This principle did not apply to the Biarritz Cité de l'Ocean project, where risks allocation was unfavourable to the public partner, and to the Poznań EfW plant project, where local authorities were deemed legally responsible for waste ownership and were thus ready to take up the demand risk. In the Tagus bridge case study, the commercial risk was initially allocated to the private partner, but contract renegotiations have gradually transferred most of the demand risk to the public partner.

The case studies also show that **when the commercial and demand risk was allocated to the private partner, the public partner undertook a number of measures to mitigate such risk**. These complementary measures can be part of the public partner obligations and be subject to penalties in case of non-performance (Athens International Airport), or be part of the broader development vision of the public partner (Superfast Cornwall). However, the cost of these interventions is rarely integrated in the PPP.

- In Athens International Airport, one of the key conditions was the provision by the Greek state of high-capacity road access to the airport, air traffic control systems of adequate quality and adequate arrangements to secure a smooth transition of airport activities from the existing site to the new facility. The commitment to provide the necessary road access to the new airport was to be met through the construction of the new Athens by-pass motorway (Attiki Odos), which was also to serve the airport. This was another PPP operation with a high cost, worth approximately EUR 1.4 billion. This obligation was imposed by the EIB, which was financing both the new airport and Attiki Odos. Had the road not been implemented in time and according to the specified quality standards, the successful, profitable and effective operation of the airport would have been compromised. So, penalty clauses were included in the Concession Contract of AIA of approximately EUR 1 million per each month of delay.
- In Superfast Cornwall the wholesale service revenues were expected to cover part of the capital investment and part of the operational expenses of the private partner (British Telecom). Therefore, the take up of services by the various and potential private service providers was critical for ensuring the financial viability of the investment. A wide range of supplementary activities were coordinated by the public agency in order to stimulate the demand and use of broadband services. These activities included demand stimulation, skills development programme, business support programme, digital inclusion programme and environmental research. In particular, the business support programme also received ERDF financing under Priority 2 of the ERDF Convergence Programme.

The availability of EU funding has not modified the risk-sharing mechanisms between the private and public partner, but has rather mitigated the financial exposure either of the public or of the private partner. In particular, in DBFO projects, such as Sopot railway station, from the perspective of the commercial lenders, the availability of European funds, whether it were an EIB loan or an ERDF/CF grant or loan, helped mitigating the financial risk of the project by reducing the debt exposure of the private contractor.

The use of the competitive dialogue procedure for selecting the private contractor played a key role in ensuring that the project design responded to the public needs

while optimizing technology choices. In this respect, there are a number of examples from the case studies that illustrate the benefits of this approach.

- In Poznań EfW, technical advisers played an important role during the competitive dialogue phase, as they discussed the optimal technical and technological details of thermal waste processing with the bidders. The discussion on the most appropriate plant design helped the public sector to re-define the functional-technical programme, which became part of the final technical specification of the project for the EfW plant constructors.
- In Bratislava by-pass D4R7, the procurement phase had a critical impact on reducing the costs of the project. This was achieved by an efficient competitive dialogue, resulting in the optimisation of the project technical specifications by the bidders, and a subsequent budget reduction of 30% compared to the initial scenario.

The experience and capacity of both the public and private partners has also been a key factor of success for achieving the PPP financial close and for the timely project implementation. The recruitment of external advisors has been necessary in all operations, especially for defining the financial, fiscal and legal terms of the various contracts underlying the PPP. Financial and knowledge support provided by national or EU institutions also proved to be necessary for a good PPP project design in a number of case studies.

- The Poznań EfW plant project received comprehensive financial support from the national PPP Platform over 2011-2013, which included financial, legal and technical advisory offered to the city to prepare and run the private partner selection process. The main task of the advisory group was to finalise the institutional model of the project according to the regulations covering the implementation of ERDF/CF during 2007-2013. As a beneficiary of EU funds, the City of Poznań received support for market testing, risk model analysis, and developing a Public Sector Comparator analysis. At the EU level, JASPERS provided some early-stage advisory services with regard to the risks involved in the project that had to be discussed with the bidders during the competitive dialogue phase of the procurement process. JASPERS was also required by the EC to verify and confirm that the final beneficiary of the cohesion grant would not be the private partner but the local residents.
- The Bratislava by-pass D4R7 project benefited a great deal from the EIB's informal technical and advisory assistance, such as design optimisation and value engineering, given to the Slovak authorities before and during the public procurement phase. It included an ex-ante analysis, which covered designing and implementing ESIF financial instruments via Slovak Investment Holding (SIH) in Slovakia, and provision of public sector PPP expertise and capacity building. A SIH team member was seconded to the EIB Project Finance team. The EIB also assisted the Slovak government in its dialogue on debt treatment for this PPP project. EIB's involvement in the project appraisal phase also helped reduce the final project costs compared to the initial estimates.

Another relevant factor of success has been the capacity of the public actor to coordinate the entire PPP process and its complex web of contracts, **including the blending with ERDF/CF**. The centralized coordination of public interests and functions played different roles. In the early PPP projects (Tagus Bridge) it was instrumental for guiding a process that was new and untested. In the most recent PPP projects (Superfast Cornwall), it helped ensuring quality of project design and created synergies with other regional programmes.

- In the Tagus bridge PPP project, a dedicated agency (GATTEL) was established to coordinate activities related to the design and implementation of a new fixed crossing. GATTEL took up a central role in the implementation of the project by providing unitary governance for several public sector parties and by acting as a single counterpart for private sector parties. GATTEL took initially the responsibility to perform studies covering economic and environmental aspects, as well as preliminary technical feasibility. Subsequently it took responsibility for managing tender procedures, including the development of tender documentation, analysis of bids and selection of the most suitable bidder. GATTEL was also responsible for submitting the CF application for EU funding and for carrying out the negotiations, as well as those related to the EIB loan and the concession agreement with the selected concessionaire. Until the completion of the new bridge, GATTEL was also responsible for the monitoring of works and for ensuring that conditions for the disbursement of the EU grant were met.
- In the Superfast Cornwall PPP project, an ad-hoc agency, the Cornwall Development Company was entrusted with the responsibility of managing the entire programme of activities related to bringing broadband services to the region. This included the entire programme cycle, from need identification to programme design and, ultimately, monitoring of the PPP private contractor and coordinating complementary interventions. This was an innovative approach for the Regional Council that was able to capitalize on the different skills and competences of the stakeholders involved in the implementation of the programme.

Strong and continuous political commitment towards the PPP choice positively supported both project design and implementation. In all case studies, projects were underpinned by a strong judgment over the superiority of the PPP procurement route. However, evidence shows that PPP contracts can also easily become the object of political battle, as in the project example of Biarritz Cité de l'Ocean that shows how contentious PPPs can be in political debate. In this project the PPP was at the centre of a political contest between the city's major and his historical opponent, who eventually succeeded in obtaining the termination of the PPP contract through different administrative appeals.

Finally, **projects that successfully combined ERDF/CF resources in PPP projects had a strong signalling effect that paved the way for similar projects**. This demonstration effect was quite large in Greece, where the Athens airport project acted as a catalyst in stimulating the institutional and capacity improvements that led to a more effective combination of Cohesion Policy resources and PPP procurement. It also facilitated the development of a more articulated national legal framework for PPPs. However, this demonstration effect has been working only very recently in other MS. In Poland, where the uptake of PPP projects is still limited, only strong administrative entities, such as Sopot, chose a PPP model for investment project delivery in the current programming period. In Veneto region (Italy), where the possibility of combining an ESIF grant in Treviso Hospital PPP project was not considered, local authorities are considering the blending model for future projects, such as the renewal of the hospital in Padua.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

PPPs are complex and potentially controversial. Both within and outside the Cohesion Policy framework, PPPs remain controversial. *A priori* attitudes, variations in the definition of PPPs and difficulties in defining at least some of the performance metrics, imply that discussion of the advantages and disadvantages of PPPs is often distorted. As a matter of fact, conclusive and convincing evidence about the superior (or inferior) performance of the PPP model compared to traditional public procurement models is lacking. This depends on a number of assumptions and specific circumstances that need be verified on a case-by-case basis, and includes the quality of project design and management capacity in public authorities, the soundness of the specific contractual arrangements, the procedure used to select the private operator and the capacity to enforce contractual obligations in a changing environment. An assessment of the relative advantages of PPPs is also hard to generalise because of the variety of contract forms that establishes a continuum of procurement methods for the delivery of public services.

Political willingness behind the PPP decision. A "myopic" attitude towards public finance considerations may distort the decision on the procurement option. Quite often the main driver in the decision of the procurement route is the need to secure the most convenient financing sources in the short run. An additional incentive in the decision to implement PPP procurement comes from the possibility of implementing off-balance-sheet solutions, which can override careful VfM considerations. As shown by the case studies, the choice to follow the PPP route for Cohesion Policy operations often reflects the political will of the public decision-maker to deal with existing needs and constraints, such as addressing large infrastructure gaps in the context of tight public budgets, rather than systematic VfM considerations. Strong warnings are coming from national public auditing authorities regarding the lack of systematic comparison with traditional procurement via public finance and the weakness of the monitoring systems in place to oversee project implementation and enforce contractual obligations.

A lot of alleged potential in the use of PPPs in Cohesion Policy. Several public and private stakeholders have paid increasing attention to the use of PPPs in combination with EU budgetary resources in the context of Cohesion Policy. This is because capital investments in infrastructure development, especially in the traditional PPP markets of transport and the environment, are among the investment priorities of Cohesion Policy. The value added of combining an ERDF/CF grant, or FI, in a PPP project rests on its expected positive impact on the financial leverage of the project and on the improved risk allocation for both the public and private parties. By limiting risks in a PPP, the ERDF/CF contribution may increase Cohesion Policy impacts, which can materialise in more affordable services for users and/or a reduced fiscal burden for the public sector.

Cohesion Policy resources, grants or loans, can be channelled and combined in multiple ways in PPP projects. Different implementation arrangements and contractual forms for blending are available and the choice between them is determined by the nature of the investment, the institutional consensus, technical capacity and past experience in managing similar contracts. However, the overview on the use of PPPs in Cohesion Policy is severely limited by the lack of complete data, which are only available for major projects. For small and medium-sized blended PPP projects, only anecdotal evidence is available and it is difficult to draw general conclusions on this basis.

The UK has the largest PPP market in Europe, but Greece leads on the combined use of ERDF/CF resources in PPPs. MS experience of blended PPP projects remains fragmented. Greece recorded the highest number of major projects implemented through a PPP model, as a result of a strong political commitment towards this approach and stringent public budget constraints. The UK, which is one of the largest PPP markets in the world, is not using PPPs to implement Cohesion Policy objectives, because a large majority of the PPP projects implemented in the UK target sectors or priority areas that are not a priority of Cohesion Policy programmes in the country. Within the framework of the wider investment strategies developed in the context of Cohesion Policy, some MS, such as Poland, Greece and Croatia, have proactively promoted the implementation of blending.

Despite a more favourable legislative framework, the uptake of PPPs in ESIF remains low. Evidence on blending indicates that the use of PPPs in Cohesion Policy is limited, although the actual number of PPP operations may be underestimated for lack of systematic data collection both at the EU and at the national/regional levels. In the current programming period no major shift has been apparent in the use of PPPs, at least in major projects. Evidence on past blended projects shows that the process of preparation and implementation of PPPs and the procedures required to prepare and implement ERDF/CF operations generally run in parallel and are poorly coordinated. The public and private stakeholders engaged in preparing PPP operations are not aware of the opportunities offered by Cohesion Policy resources, or they consider them a further complication. The result is that PPPs are not systematically designed to fit into the ERDF/CF programming cycle and that PPP operations are not part of the development strategy embedded in Partnership Agreements and individual OPs.

A more extensive use of FIs in Cohesion Policy is likely to bring about more blended PPP projects. Small PPP projects are sometimes grouped under the umbrella of FIs, but evidence of the number of small and medium-sized PPP blended projects is fragmented. Some of these instruments, notably those promoted by the JESSICA technical assistance initiative in 2007-2013, were specifically designed to support PPPs in Cohesion Policy. They proved to be a convenient delivery mode allowing small and medium-scale projects to be bundled under a single financial envelope, usually in the same sector or domain (a typical example is that of urban regeneration or energy efficiency interventions). However, evidence shows that, in the past programming period 2007-2013, FIs were not as successful in attracting private sector financing as initially expected.

The EIB has played two key roles in promoting the adoption of PPPs in the delivery of Cohesion Policy. In response to the economic and financial crisis, the EIB has expanded the provision of FIs addressing PPP projects' bankability issues. These can be used as stand-alone products or together with ESIF, as, for instance, when resources from ESIF are combined with EFSI. The EIB has also been providing advisory and technical assistance services that help MAs to better design and structure PPP projects.

MAs do not have adequate in-house technical and administrative capacity to manage PPP contracts. PPP contracts are usually highly complex because of their long-term and integrated nature. They may be subject to re-negotiation or scope re-definition, and the integration of different components of the project life cycle makes the design of the conditions for risk allocation particularly challenging. Some forms of standardization of contracts and procedures may be possible, especially in small-scale PPPs in specific sectors, but most PPPs are structured in transaction-specific ways requiring strong technical and contractual competencies on the part of the public actor in order to achieve balanced risk allocation. Advisory services can be provided to MAs in different forms, but interviews have indicated that too often public authorities do not know how to use the opportunities offered by the advisory market to prepare PPPs within Cohesion Policy.

There is no conclusive evidence that a PPP approach is conducive to higher levels of EU fund absorption. The focus on achieving expenditure targets generally does not work in favour of the PPP approach. ERDF/CF may also be an alternative rather than a leverage of private funds when the availability of sizeable amounts of those funds reduces the need to look for alternative sources of funding in the private sector.

Evidence shows that PPP projects are completed on time and on budget, but there is weaker evidence of their long-term performance. Given the long-term nature of the partnership, the success of a PPP, including its actual impact on public finances, can be fully assessed only in the long term. PPPs that proved to be very successful in delivering the expected outcomes at the beginning, can be disappointing in the long run. Long-term impacts are mixed, but it is important to consider that the failure of an investment project can be due to multiple causes, and may well have nothing to do with the choice of PPP procurement. This is typical, for instance, of projects underpinned by poor demand analysis, or where the strategic choice of the investment was not appropriate.

Assessment of the performance of PPPs can only be done on a case by-case basis. It is difficult to identify standardized PPP arrangements that systematically deliver better results. The judgement of the value added of PPP, in Cohesion Policy as in other contexts, tends to be on a case-by-case basis, or possibly limited to certain sectors and specific national contexts. Both large and small to medium-sized projects can be successfully implemented following a PPP procurement route. The success of a PPP depends on the soundness of the underlying economic and financial analysis, the quality of the project design itself, as well as on the capacity of all the parties involved and the ability to coordinate their joint actions over time.

Future perspectives include new sectors and combinations of multiple instruments. The literature review and the case studies have revealed some interesting experiences with relevant implications for the future of PPPs in Cohesion Policy, although these experiences are still not mature enough to express a conclusive judgement. A first possibility is the combination of multiple instruments, especially ESIF and EFSI, also entailing the involvement of new instruments and stakeholders, such as impact fund investors, as illustrated in the case study of Treviso Hospital. Impact investing relates to a relatively new and rapidly expanding area of alternative investments, where investors – mostly active in the private or non-profit arenas - intend to generate a positive social or environmental impact alongside a financial return. In addition, sectors such as social infrastructure, tourism and leisure represent investment areas where PPPs have been applied more extensively in recent years, and there may be scope to expand their use in the future of Cohesion Policy.

5.2. Recommendations

It is difficult to provide a definitive answer to the question of whether PPPs should be promoted in order to increase their use in the future of Cohesion Policy. The literature review, interviews and case studies indicate that properly designed PPPs can be effective in pursuing Cohesion Policy objectives. However, PPPs in Cohesion Policy remain complex to operationalize, because private partners have to comply with additional requirements. A PPP should be seen as one possible option for pursuing Cohesion Policy objectives, while proper VfM considerations should guide the selection of the most appropriate procurement option, which may or may not be a PPP.

Develop a sound and shared methodology for performing VfM analyses of public investments. Since approaches to VfM are still fragmented and not well known to stakeholders, it is necessary to develop well-identified standard metrics and methodology to perform such analyses. In the case of blended PPP projects, VfM should also cover the specific value added of the procurement route with respect to facilitating the achievement of Cohesion Policy objectives. VfM requirements can be made more explicit in particular in the context of major project financing decisions, where the cost-benefit analysis included in the application form already provides a good evidence base for it.

Promote a more strategic approach to PPPs. Both the EP and national authorities should promote a more strategic approach to the development of a PPP project pipeline. This would imply that the decision on the procurement model of public investments is not taken on a case-by-case basis, but embedded in a structured institutional process of public investment management. This can involve existing PPP-dedicated units in government agencies, which have PPP specific technical expertise and know-how, but do not necessarily have a broader strategic view of the opportunity to promote PPP in the broader context of regional development policies. Political commitment, a favourable regulatory environment, a mature financial sector and a good understanding of the different blending options available are key factors conducive to the development of strategic pipelines for PPP projects in Cohesion Policy, as well as in other policy areas of the EU.

Promote more systematic ex-post assessment of PPP performance. Public debate on the alleged advantages of PPPs in the context of Cohesion Policy is still poorly informed and lacks a sound evidence base concerning the long-term assessment of blended PPP projects. Documentation is still very limited, particularly in the context of Cohesion Policy. Existing studies within the EU have mostly been carried out at the national level and in the broader context of national public spending reviews (notably in the UK, France and Ireland). Ex-post evaluation of the performance of blended PPP projects should be carried out in order to draw lessons and possibly improve the current regulatory and legislative framework, if needed.

Support the development of technical expertise, especially at the local level. The development of technical skills and capabilities within the public sector, especially for those directly involved in the design and implementation of the procurement process, is to be strongly encouraged. In this way, there is greater assurance that contractual specifications will be designed with a view to maximising the comparative advantages of the private actor and minimising any possible opportunistic behaviour. Greater recourse to existing EU advisory and capacity building tools may help to overcome some of the existing fragmentation in the current regulatory framework of Cohesion Policy.

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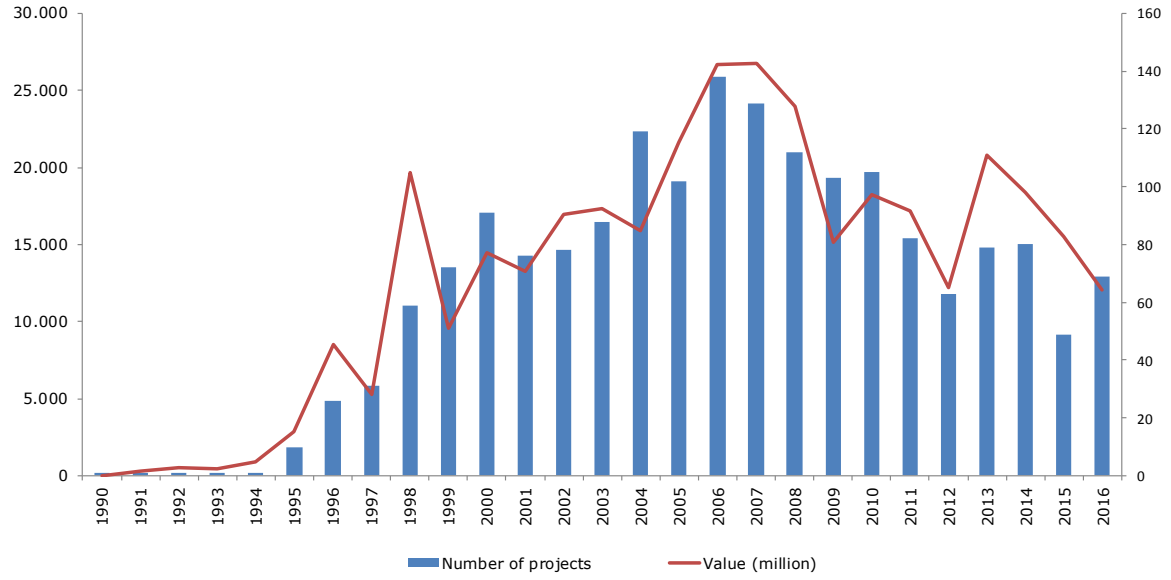
ANNEX 1: STATISTICAL ANALYSIS OF PPP DATA (EPEC DATA)

According to EPEC data, **1 766 PPP transactions** have reached financial close in the European Market[58] between 1990-2016 for a **total value of EUR 356 billion[59]**.
As showed by the figure below, the number of PPPs projects has started to significantly increase since 1995 by reaching its maximum level in 2006: 138 PPP transactions for a total market value of EUR 26.7 billion. The 2007-2008 economic and financial crisis has marked a downward trend with the number of PPPs constantly decreasing and reaching the lowest values in 2015 (49 transactions). This can be explained by the challenges faced by private companies to borrow money during the crisis and therefore to join PPPs projects. The value of transactions has been swinging over the years with an average transaction value significantly decreasing in 2016 (EUR 174 million against 319 million recorded in 2015).

Figure 11: European PPP Market 1990-2016 by Value and Number of Projects



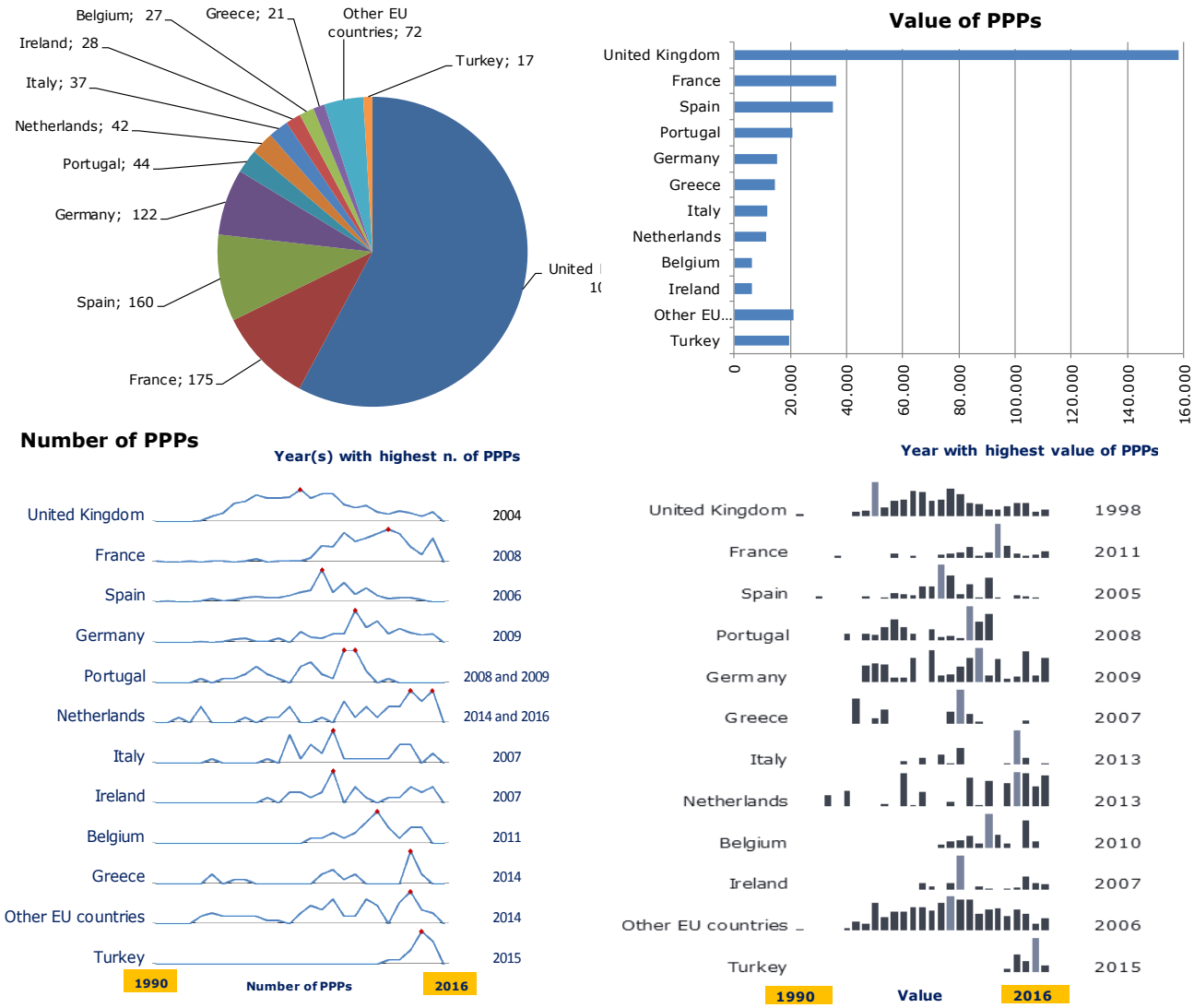
Source: Authors based on EPEC data

UK has historically been the largest PPP market in Europe both in terms of value, with a total of EUR 158.2 billion, and in terms of number of projects, with 1 021 deals closed between 1990-2016. France and Spain are the second largest markets with 175 and 160 PPPs projects closed for a total value of EUR 36 and 35 billion, respectively. Netherlands, Portugal and Italy are relatively smaller markets - by closing around 40 PPPs transactions since 1990 - while Belgium and Greece are new emerging ones - where PPPs projects have started to develop since 2006. Interestingly, a total of 72 projects have been recorded across 16 EU countries, with Denmark (15 PPPs) Poland (11 PPPs) and Hungary (10 PPPs) having the largest share. Amongst these, there are countries – such as Bulgaria, Latvia, Luxembourg and Slovenia - which have closed only 1 PPP transaction since 1999.

[58] Defined as EU-28, countries of the Western Balkans and Turkey.
[59] These figures refer to the number and value of PPPs transactions i) structured as design-build-finance-operate (DBFO) or design-build-finance-maintain (DBFM) or concession arrangements which feature a construction element, the provision of a public service and genuine risk sharing between the public and the private sector; ii) financed through 'project financing' and reached financial close in the relevant period; iii) entailing transactions over EUR 10 million.

As showed by the figure below, the financial and economic crisis has been impacting in all MS, even in the leading PPPs markets. In the UK, for instance, PPPs transactions have been decreasing (since 2007) on an annual average of 11% by dropping to 28 in 2016, which represents a reduction of 64% as compared to the year before the crisis (77 transactions in 2006). In Spain, the decrease has been more significant than in other countries. The number of closed PPPs dropped by 70% in 2007 (10) as compared to 2006 (33) and has been falling down until 2016 (0).

Figure 12: European PPP Market by countries, 1990-2016



Source: Authors based on EPEC data[60]

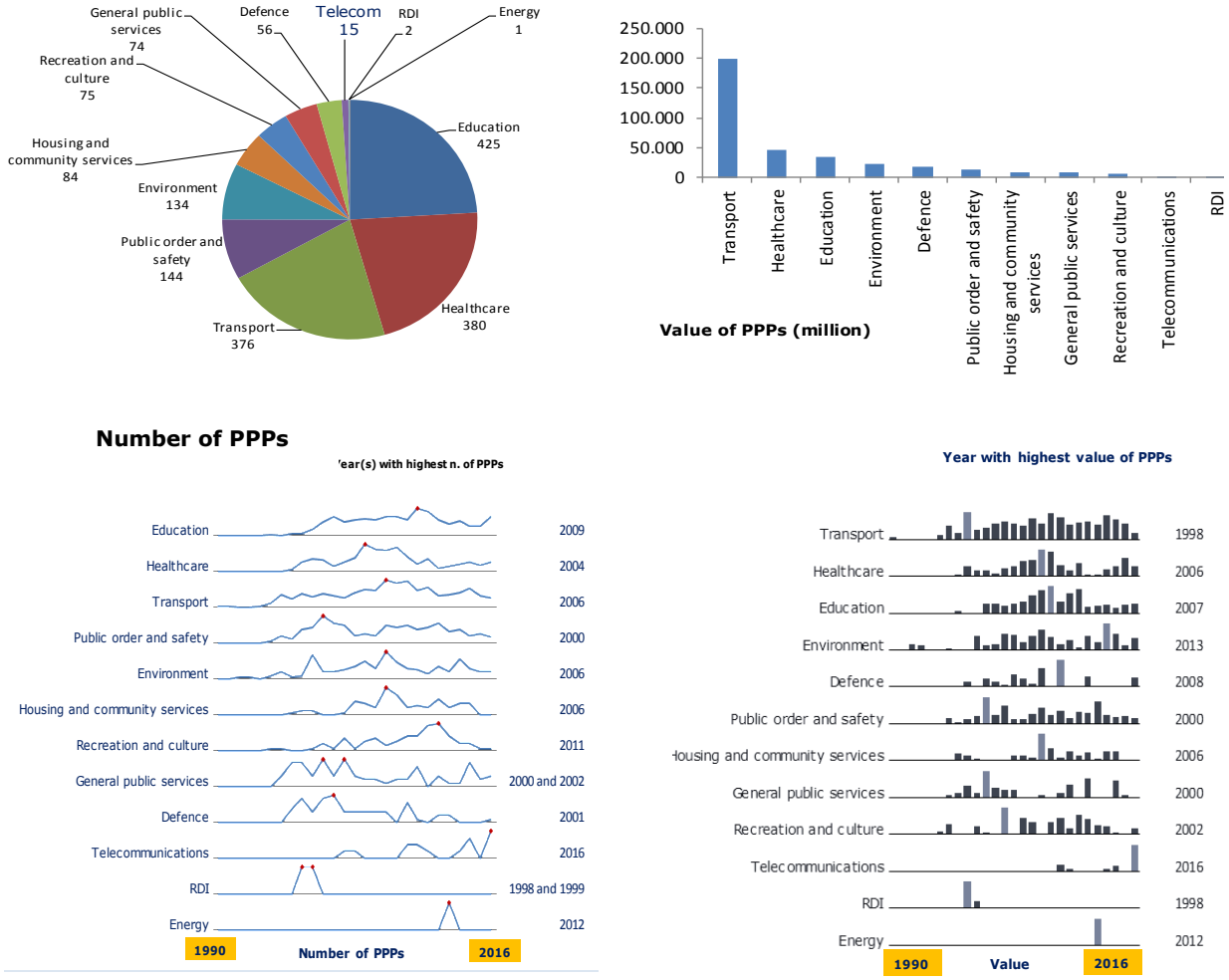
In terms of sectors, education, healthcare and transport have seen most projects developed with 425 380 and 376 deals closed between 1990-2016 respectively. However, the transport sector is the largest one in terms of value with over EUR 199.8 billion worth of transactions, exceeding five times the value of PPPs financed in the education and healthcare sector (46 and 34 billion, respectively). These traditional sectors for PPPs have been contracting over the last five years both in terms of number and value. For instance, the transport sector has

[60] Other EU countries include those countries with less than 15 PPPs operations closed Austria, Croatia, Bulgaria, Cyprus, Czech Republic, Denmark, Finland, Hungary, Latvia, Lithuania, Luxembourg, Poland, Romania, Slovakia, Slovenia, Sweden.

closed 11 transactions in 2016, which represents its lowest value in over 10 years. In the healthcare sector, whilst the number of projects that reached financial close in 2016 increased to 15, the aggregate value contracted significantly to EUR 2.3 billion.
Focusing on other relative minor sectors, a steep increase in value terms can be observed for environment (from EUR 374 million in 2015 to EUR 1.2 billion in 2016) as a result of the number of large waste treatment deals in the UK[61]. As much as 75 PPPs have been closed in the recreational and culture sector with the highest best performance recorded in 2011 (11 PPPs transactions for a total value of EUR 565 million). Since then, PPPs deals have been decreasing by closing 1 deal in the last 2 years (e.g. in 2015 1 deal has been closed for total value of EUR 12 million).

Telecommunication represents an emerging market in terms of PPPs by closing 4 transactions (all concerning broadband networks in France) in 2016 – namely its highest value - for a total amount of EUR 1.2 billion. RDI and Energy are the less active sector in terms of PPPs with only 2 and 1 deal closed since 1990 for a total value of 160 and 49 million, respectively.

Figure 13: European PPP Market by sectors, 1990-2016



Source: Authors based on EPEC data

[61] EPEC Market Update 2016.

ANNEX 2: LIST OF INSTITUTIONS INTERVIEWED

NAME OF INSTITUTION	GEOGRAPHICAL COVERAGE
European Commission, DG REGIO	Europe
European Commission, DG ECFIN	Europe
European Court of Auditor	Europe
EPEC	Europe
JASPERS Networking and Competence Centre	Europe
EIB	Europe
Sinloc - PPP consulting company	Italy
PPP Secretariat	Greece
National Agency for Investment and Competitiveness	Croatia
Ministerio de Hacienda y Función Pública - Dirección General de Fondos Europeos	Spain
Public and Private Partnership Competence Centre	Lithuania
Pomorskie Regional Authority City of Sopot Bank Gospodarstwa Krajowego (BGK) – commercial lender The City of Poznań SUEZ Zielona Energia Sp. z.o.o	Poland
Espelia – PPP consulting company Conseil Municipal de Biarritz – City council Conseil régional Nouvelle-Aquitaine – regional council	France
Ministry of Finance (MoF) Ministry of Transport, Construction and Regional Development (MTCRD)	Slovakia
Department for Communities and Local Development BT Group Cornwall Development Company	UK

ANNEX 3: CASE STUDIES

A3.1 Athens International Airport

The project factsheet

Country (region)	Greece (Attica)
Sector	Transport (airport)
Programming period of reference	Before 2007 (1994-1999)
PPP actors	Public authority: Greek State Private concessionnaires: Athens International Airport SA Financial backers: EIB, Bayerische Vereinsbank
Objective of the PPP within the framework of cohesion financing	Construction and development of a new airport included in the TEN-Transportation projects (integration of the European transport system and development of a less developed MS)
Investment value and Cohesion financing support	Approximately 2.2 billion EUR[62], CF support nearly 10% of project cost
Financial structure	Grant: EUR 220 million (CF) Loan: EUR 902 million (EIB) Equity: EUR 330 million (equity and shareholders loan)
Contract agreement between parties	BOOT (Built, own, operate and transfer) Duration of concession: 30 years
Blending model	Joint finance of capital expenditure via CF contribution
Rationale for selection of the case study	One of the early experiences of combining a CF grant in a PPP project. A successful PPP project that had a strong demonstration effect in Greece.

Introduction and strategic framework

The Eleftherios Venizelos Athens International Airport (AIA) is often mentioned as a pioneering case of PPP-funded construction and management of a new airport, the first of its kind in Europe. Like the Vasco de Gama crossing on the Tagus river in Lisbon, it represents one of the early cases where a PPP procurement was used in the context of Cohesion Policy. The AIA has been often presented as a good practice example in the involvement of private finance in the airport sector and has demonstrated resilience in the very challenging circumstances following the 2009 Greek debt crisis and recession.

The main rationale of the project was linked to the modernisation needs of the Greek economy in the early 90's and the objective of providing additional airport capacity and upgrading airport-related services in the Greek capital. The Athens airport was and remains the main gateway for international air traffic in and out of Greece, both passenger and freight. The need to find a location for a new airport had been a concern for public authorities since the mid-70's. The project for the new airport was included in the Community Support Framework for Greece already in 1987. After the signature of the Maastricht Treaty in 1992 and the establishment of the CF, the project was included among the transportation projects identified in 1994 by the Christophersen Group for the completion of the Transeuropean Network in the transport sector - a "project of importance", although not one of the 14

[62] Investment value and financial structure are drawn from the AIA SA website and differ from those foreseen at the signature of the Airport Development Agreement.

projects designated as priority projects (EC, 1995). According to the 1996 CF annual report (European Commission, 1997) the transport strategy for Greece supported by the Fund included the "construction of a major international airport for Athens" at Spata and the modernisation of the air traffic control system. The report also stated that "*the success of this strategy depends on the mobilisation of funds from the private sector, which will benefit from the future revenue generated by these investments*".

The project should be seen against the wider backdrop of the development of the PPP sector in Greece and its combination with Cohesion Policy resources. In this respect, it is possible to distinguish three waves of PPP in the Greek experience. An early wave which took place in the mid-90's, where PPPs were large-scale transportation projects. Then there was a second generation of PPPs, focused again primarily on transportation projects. In 2005 the policy and implementation framework for PPPs was rationalised through the approval of National Law 3389[63], which provided a systematic approach to design and plan PPPs. This law established the Inter-ministerial Committee for PPPs and the Special Secretariat for PPPs and paved the way for a "third wave" of PPP operations, enabling a wider sector use of PPPs, often in combination with EU financial support. The AIA project has been one of the catalysts in stimulating the institutional and capacity improvements now in place, which may lead to a more effective combination of cohesion resources and PPP procurement in Greece.

Design and implementation arrangements

After the 1977 decision on the selection of the site for the new airport, a long period of uncertainty followed, when no active decisions were taken, apart from the acquisition of land during 1978-1980 by the Greek authorities. Eventually, the process was re-ignited in 1991, and at that stage the government decided to follow a BOT procurement route for the construction and management of the new airport. The international tendering procedure was launched in 1991 and two bidders were shortlisted. The offer by a consortium led by Hochtief Aktiengesellschaft was selected as the preferred one, but a further period of hesitation followed, as the decision on the BOT approach was still subject to controversy within the government. The decision was finally confirmed in 1993 and the contract was awarded to the Hochtief-led consortium.

The main vehicle at the centre of the contract structure is Athens International Airport (AIA) SA, a new special-purpose company established to carry out the construction, management and development of the new airport. The central agreement (a concession contract) governing the rights and obligations of the public and private parties is the Airport Development Agreement (ADA) between AIA SA and the Greek State. AIA SA is 55% owned by the Greek State and 45% by private parties, mostly the companies responsible for the construction and management of the new airport. The key elements of the ADA are the following:

- The Greek State awards to AIA SA the exclusive right to carry out the design, finance, construction, commissioning, maintenance, management and development of the new airport, based on an agreed programme with milestone dates;
- The duration of the agreement is 30 years from commencement date;
- Access to land is based on a specific form of lease ("usufruct", not ownership), with AIA SA paying a progressively increasing rate;

[63] The law 3389/2005 introduced the PPP market in Greece. The law set out the conditions pursuant to which a project may qualify for a PPP.

- AIA SA is free to determine airport charges on a commercial basis, with a maximum return on equity of 15%, in addition to coverage of operating and debt service costs;
- AIA commits to open the new airport no later than 5 years from commencement date.

Apart from the above rights and obligations, one of the key conditions was the provision by the State of high-capacity road access to the airport, air traffic control systems of adequate quality and adequate arrangements to secure a smooth transition of airport activities from the existing site to the new facility. The commitment to provide the necessary road access to the new airport was to be met through the construction of the new Athens by-pass motorway, which was also to serve the airport. This was a large-scale project, worth approximately EUR 1.4 billion, to be implemented through another PPP operation, the Attiki Odos road concession. The construction of the Attiki Odos motorway was an obligation imposed by the EIB, which financed both projects. It was also an obligation of the Greek government towards its German co-partners involved in the construction of the airport. Penalty clauses were thus included in the Concession Contract of AIA of approximately EUR 1 million per each month of delay (Omega Centre, 2014).

Provisions for the governance of the airport construction and development process were carefully articulated and included:

- Fixed-price, fixed date contract (turnkey contract) between AIA SA and the construction consortium;
- Airport operations advisory agreement between AIA and FAG (Flughaven Frankfurt AG, the Frankfurt airport operator), covering activities before the opening of the new airport and after the start of operations at Spata;
- Contract between AIA and an independent technical advisor (Parsons) to check that works were carried up in line with technical specifications;
- The AIA governance structure foresaw a Board of Directors including 4 designated by the Greek State, 4 by the private sector and 1 independent, with Chairman proposed by the private sector.

The overall cost of the project was EUR 2.2 billion, matched by a funding structure including various public and private sources (Table 13). Loans were the main component in the funding structure. The availability of Cohesion Policy resources has facilitated the successful delivery of the PPP, although the overall proportion of CF resources was relatively moderate because of the significant revenue generation potential of the project.

Table 13: Financing structure of the project

SOURCE OF FUNDING	TYPE OF FUNDING	AMOUNT(EUR)	SHARE OF TOTAL COST
Greek public sector	Equity (7%) Grant (6%), resources of the Airport Development Fund (13%)	572 million	26%
EIB	Loan	908 million	41%
Bayerische Vereinsbank	Loan	308 million	14%
Cohesion Fund	Grant	250 million	10%
Private partners	Equity and subordinated loans	177 million	8%

The design of the PPP arrangement was careful and in line with best practice at the time of its implementation. The various contracts were combined in a reasonable way, possibly also due to the requirements of European bodies, including the EIB. These included strict conditions concerning the availability of connecting roads and robust process of technical assistance by experienced airport operators during construction and operation.

It is important to note that AIA SA is majority owned by the Greek authorities, which have been therefore entitled to a substantial share of any profits from the operation of the airport. Although the overall commitment of Greek public sector funding constitutes a relatively limited share of the funding, it has to be considered that the Greek state committed to the construction of the motorway to the airport, whose cost is not included in the financing structure of this PPP arrangement. It should be noted that the commercial/revenue risk was mitigated by the fact that, given the closure of the old airport, the new airport enjoyed a considerable monopoly power on the air traffic market as the main international airport in Greece.

Implementation, performance and achievements

The construction was completed 4 months ahead of schedule, while the opening of airport operations had to wait for the completion of the motorway links, which took place in late March 2001. The design of the airport is flexible and based on a modular approach, so that progressive capacity extensions can be implemented in line with demand requirements. Initial capacity was of the order of 16 million passengers, but successive improvements in airport management and IT systems were such that current capacity is estimated at around 26 million passengers per year. Comparing expectations on traffic volumes at the date of the agreement and actual results, it appears that as of 2017 these have been met, despite considerable traffic volatility over the years and a very challenging period corresponding to the Greek debt crisis and the deep recession. Overall, commercial performance has proven resilient to very challenging circumstances, and the airport produced net revenues also during the most difficult years (Papadimitriou, 2012).

An economic impact study (commissioned by AIA SA) has assessed the economic impact of the project through an input-output model incorporating direct, indirect and induced/ multiplier impacts. The exercise has produced an estimated impact of EUR 5.1 billion in value added, or 2.63% of national GDP in 2012 and nearly 100 000 jobs at national level. These magnitudes compare favourably with similar exercises carried out for airport projects elsewhere in Europe (Athens University of Economics and Business, 2013).

The project has broadly achieved its strategic objectives. This PPP has supported the achievement of the CF objectives as it has facilitated the implementation of a transportation infrastructure of European relevance and of key importance for the development of the Greek economy. The information in the CF annual reports indicates that the project was closely monitored by the services of the Commission and financially supported with satisfactory results (European Commission, 1997).

It appears that the use of a PPP approach, although somewhat controversial at the time, has facilitated the implementation of the project, enabling its completion on time and substantially in line with budgeted costs. No explicit value for money calculations were carried out comparing alternative procurement routes, however given the nature of the project the choice of a PPP approach involving highly competent international operators seems justified. Compared to other PPP arrangements, the Athens airport is a good example where the public sector shared a substantial share of revenue in the post-construction phase. The public sector has retained a considerable interest as a shareholder in AIA SA, and therefore has enjoyed substantial revenue streams from AIA dividends, taxes and airport fees, which were estimated in excess of EUR 870 million for the period 2002-2011 (Papadimitriou, 2012).

Amongst recent trends, three elements are worth mentioning, since they illustrate how a long-term concession structure can evolve over time in response to changed economic circumstances and policy needs.

- Hochtief has divested its participation in airport operations worldwide, and a Canadian pension fund has replaced it in AIA's shareholder structure.

- A 20-year extension of the concession period, which was one of the options included in the ADA, has recently been agreed between the Greek authorities and AIA SA, with the payment of EUR 600 million to the Greek state for this extension. In addition, AIA SA expects to make new investments wort approximately EUR 400 million.

- The possibility of selling part of the public shareholding in AIA is currently being considered by the Hellenic Republic Asset Development Fund (HRADF)[64] in the context of the privatisation strategy aimed at addressing the Greek debt crisis.

In particular, the successful transition from construction to long-term investors is sometimes considered one of the secondary long-term benefits of PPP arrangements in the infrastructure sector. The transition of ownership to long-term investors interested in the successful operation of the facility is seen as a guarantee to avoid the potential conflict of interest between the constructor's profit maximisation behaviour and the long-term viability of the investment, which often arises when construction companies are the dominant shareholders in concession companies.

[64] HRDAF currently owns 30% of the share capital of AIA SA.

A3.2 Tagus Bridge Crossing

The project factsheet

Country (region)	Portugal (Lisbon)
Sector	Transport (transport)
Programming period of reference	Before 2007 (1994-1998)
PPP actors	Public authority: GATTEL (Government of Portugal) Private concessionnaire: Lusoponte S.A. Financial backers: EIB, Commercial banks
Objective of the PPP within the framework of cohesion financing	Total Cost: EUR 897 million[65] CF: EUR 319 million (36%)
Investment value and Cohesion financing support	Approximately 2.2 billion EUR[66], CF support nearly 10% of project cost
Financial structure	Grant: CF EUR 319 million Loan: EIB EUR 299 million Equity: EUR 116 million Toll revenues during construction: EUR 50 million Other sources: EUR 113 million
Contract agreement between parties	PPP scheme: DBOT contract covering the design, finance, construction and management of a new bridge and the management of the existing April 25th Bridge Initially variable duration: until total traffic flows on both crossings reached 2.25 billion trips from the date of the transfer of April 25th bridge or (at the latest) 33 years after the date of the agreement, i.e. 2028.
Blending model	CF to joint finance capital expenditures
Rationale for selection of the case study	One of the early experience of combining a CF grant in a PPP project. Initially considered a successful PPP, the judgment on the merit of the PPP became less positive when the PPP contract started being subject to several re-negotiations.

Introduction and strategic framework

Three policy strands come together in the Tagus bridge case, as an illustration of an early application of the PPP concept in cohesion policy: the expanding use of transport PPPs in the

[65] From the Lusoponte website.
[66] Investment value and financial structure are drawn from the AIA SA website and differ from those foreseen at the signature of the Airport Development Agreement.

European market, the launch of a more active European Economic Community policy to support the growth of less developed MS and the modernisation needs of Portugal soon after its 1986 accession to the EEC. The project was a pioneering effort to apply an innovative approach to project delivery and to the use of Cohesion Policy resources.

The Vasco de Gama project has often been presented as one of the success stories in the involvement of private finance in the transportation sector. This was the view in Perez (2004) and in several ex-post evaluation studies carried out in the early 2000's (Ove Arup, 2003; Ecorys, 2005). The project has been, however, also subject to sharp criticism because the initial concession agreement had to be subjected to different re-negotiations that have massively increased the final cost of the concession to the Portuguese taxpayer.

The project should be seen in the context of a policy to boost the quality of Greater Lisbon's transportation infrastructure, given that the existing "25th April" road bridge, the only fixed link between the northern and southern part of the metropolitan area, was reaching its capacity limits. The response of the Portuguese government was to develop an urban investment strategy for Greater Lisbon based on a multi-mode transport approach relying on multiple funding routes: conventional public works finance (roads), public enterprise (Lisbon Metro) and – starting with the new Tagus crossing – private finance. The coherence with Cohesion Policy requirements was evident and the establishment of the CF provided a unique opportunity to exploit the resource of a new instrument dedicated to support the growth of less developed regions in Europe.

Design and implementation arrangements

Discussions on the possibility of involving the private sector in a concession structure took place within the Ministry of Public Works around 1990. The Ministry was aware of recent trends in the private financing of road infrastructure in the UK, related to estuarial crossings such as the Dartford crossing and the Second Severn bridge. The view at the ministerial level was that a new crossing would be technically challenging and private sector involvement, possibly attracting international expertise, would have facilitated the implementation of the project.

Against this backdrop, in 1991 the Ministry of Public Works established a dedicated agency, GATTEL (Gabinete da Travessia do Tejo em Lisboa) to coordinate activities related to the design and implementation of a new fixed crossing. GATTEL took up a central role in the implementation of the project, on the one hand by providing unitary governance for several public sector parties and on the other acting as a single counterpart for private sector parties. GATTEL took initially the responsibility to perform studies covering economic and environmental aspects, as well as preliminary technical feasibility. Subsequently it took responsibility for managing tender procedures, including the development of tender documentation, analysis of bids, recommending and in due course selecting the most suitable bidder. GATTEL was also responsible for submitting the application for EU funding and carry out the negotiations within the framework of the CF, as well as those related to the EIB loan and the concession agreement with the selected concessionaire. Until the completion of the new bridge, GATTEL was also responsible for the monitoring of works and ensuring that conditions for the disbursement of EU grant were met. The main vehicle at the centre of the contract structure is the concession company Lusoponte S.A., a special purpose vehicle which constitutes the counterpart to the Portuguese government in the concession agreement between the conceding authority and the concession company.

The general principle was for a "DBOT" concession. The procurement procedure was based on an open tender with prequalification. The selected bid was submitted by Lusoponte, a

special purpose vehicle whose main shareholders were 7 Portuguese and European construction companies. Despite the complexity and thoroughness of the procedure, the timetable was relatively short and lasted only 29 months. The main criteria for the selection of the concessionaire were technical quality, environmental impact & management, financial proposal and the proposed toll levels.

The overall cost of the project was EUR 897 million. Public sector contributions, which include the CF grant and the revenues generated by the existing bridge covered 42% of the project costs.

Table 14: Tagus Bridge - Financing structure of the project

SOURCE OF FUNDING	TYPE OF FUNDING	AMOUNT(EUR)	SHARE OF TOTAL COST
Lusoponte	Equity	116 million	13%
CF	Grant	319 million	36%
Net revenue during construction (April 25th Bridge)	Grant	50 million	6%
EIB	Loan	299 million	33%
Other (including commercial loans)	Loan	113 million	13%

Revenue for the private party would be based on user charges (tolls) and traffic risk as such would be borne by the concessionaire. However, traffic risk for the concessionaire was mitigated by a number of provisions. In the final concession agreement, the concessionaire would take on the management and net revenues from the existing bridge. Thus potential competition from the existing bridge would be removed, and the substantial and well-established traffic flows on the 25th April Bridge would generate a (relatively) low-risk source of income. In addition, the concessionaire would be entitled to compensation – or alternatively right of first refusal – in case other fixed link road infrastructure across the river were to be built during the concession period within a certain distance from the new bridge. Further contract linkages were essential to allocate project risks and achieve a good alignment of incentives:

- The construction contract between Lusoponte and Novaponte, the joint venture responsible for the construction of the new bridge, and
- The contract between Lusoponte and the joint venture responsible for the operation of the two bridges.

Implementation, performance and achievements

The project was completed according to schedule 2 days before deadline, in time for the Expo 98 events, with likely positive impacts on the success of the urban regeneration project on the former industrial site of the Expo 98. In the early years of operation, traffic was higher than expected, partly because lower toll levels applied as compared to those foreseen in the concession contract. The success in achieving a very ambitious timetable is probably due to

the establishment of a highly motivated dedicated agency which carried out its tasks with determination and in a professionally competent way.

Nevertheless, allocation of risks has not been satisfactory. During the construction of the new bridge (Vasco da Gama) the foreseen toll increases on the existing 25th April bridge could not be applied due to hostile popular reaction. Since 2000, several re-negotiations of financial conditions ("re-balancing" agreements) had to be concluded to compensate the concessionaire because the toll levels foreseen in the initial concession agreement could not be applied. As of 2012, there have been 6 such re-negotiations, which have increased substantially the cost of the concession to the Portuguese taxpayer, partly eliminating advantages offered by private sector involvement in the construction phase. These agreements have been heavily criticised (Portuguese Court of Auditors, 2001 and Pinto, 2012) as excessively favourable to the private party. Calculations of the present value of additional commitments agreed over time by the Portuguese Government quantify the additional public support to the project in the EUR 500-600 million range in 1995 values, i.e. well above 50% of the project's capital costs. It has been argued that the closure of GATTEL in 2001 has deprived the government of a skilled negotiator, with negative impacts on the outcome of the rebalancing agreements for the public sector.

The project raised considerable objections on environmental grounds and substantive action was required in terms of environmental compensation before final approval. During the construction period one of the key difficulties that needed to be addressed related to the construction of the southern portion of the new bridge in proximity of the environmentally sensitive areas (Samouco Salt Pans). To access CF resources, the project needed to comply with environmental requirements that implied conducting a full Environmental Impact Assessment (completed June 1994), with public consultation, and the implementation of various compensatory measures. Lusoponte was required to establish a new entity, CEMA (Environmental Study and Monitoring Centre), responsible for communications with the wider public and government, monitoring of construction impacts, implementing mitigating measures and monitoring during operation. The final instalment of the agreed CF allocation was not released until all the environmental provisions were carried out in a satisfactory manner.

According to several observers, the use of a PPP approach has facilitated the implementation of a technically challenging project, enabling its completion on time and substantially in line with budgeted costs. The view of the authorities who promoted the PPP approach at the time (Perez, 2004) was that a traditional public works financing implemented in Portugal in the early 90's would have been difficult if not impossible. If this view is accepted, this would have made more difficult the deployment of Cohesion Policy resources, as these are generally deployed in line with the progress of works. The availability of cohesion policy resources has facilitated the successful delivery of the PPP. It is also very likely that the involvement of the CF has improved the environmental sustainability of the project.

In judging the project, it is important to distinguish performance problems linked to the economics of the project – namely the fact that the solution selected did not address the problem of congestion on the existing bridge and may have provided incentives to urban sprawl - and those related to the project being delivered as a PPP. The latter seem to relate to inadequate allocation of certain risks and the fact that the public sector took on the obligation to compensate the concessionaire and maintain the private profitability stipulated in the concession. It is possible that the initial perceived success of the Tagus bridge road crossing gave the impression that PPPs were the "way to go" in the Portuguese road transport sector. This, together with the permissive financial conditions in the late 90's and early

2000's, may also have provided an incentive for PPP-based new road construction projects (e.g. the road DBFO programme launched in 1997-2002), which led to unaffordable levels of public sector commitments when the financial crisis and recession hit Portugal.

A3.3 Superfast Cornwall

The project factsheet

Country (region)	United Kingdom (Cornwall)
Sector	ICT
Programming period of reference	2007-2013
PPP actors	Public authority: Cornwall Council (acting through the Cornwall Development Company) Private concessionaire: British Telecom
Objective of the PPP within the framework of cohesion financing	Bring fast speed internet connection in a less developed region.
Investment value and Cohesion financing support	Total Cost: EUR 153 million ERDF grant: EUR 62 million (40%)
Financial structure	Grant: 62 million Private funding (BT): EUR 91 million
Contract agreement between parties	Private DBO, private design, build and operate with a public grant
Blending model	CF to joint finance capital expenditures
Rationale for selection of the case study	Example of PPP in ICT in a less developed region – Cornwall and the Isles of Scilly Region - in a highly sophisticated institutional PPP environment (UK)

Introduction and strategic framework

The Next Generation Broadband (NGB) - also known as Superfast Cornwall - is a major blended project financed in the Cornwall and the Isles of Scilly Region (hereafter Cornwall). Two main factors make this project noteworthy. It is amongst the most significant PPP investments in UK in the information and communication technology (ICT) sector and an unusual major Cohesion Policy investment in a lagging European region. The project benefitted from an EU grant contribution under Priority Axis 3 - 'Transformational Infrastructure' of the ERDF OP "Cornwall and the Isles of Scilly" (2007–2013), whose objective was to accelerate the growth of the region through the development of high-impact infrastructure aimed at improving the connectivity of business in the Cornwall region with national and international markets. The case of Superfast Cornwall shows how opportunities for combining PPP and ERDF financing can be exploited in a less developed region of a wealthy MS, and can bring about substantial socio-economic benefits. The ERDF contribution played a crucial role in allowing investment feasibility and mitigating the risk for the public and private actors.

Historically, UK is one of the largest market for PPPs worldwide. In the field of ICT, the development of PPP dates back to 2000s when investments in this sector became a priority both in the EU and national agenda. In 2009, the UK Government strengthened the relevance of ICT investments by publishing the Digital Britain Report including its ambition to transform the UK in one of the leading digital economies. At EU level, the need for raising the volumes of ICT investments to improve digital and physical access to services was further highlighted by the so called "Digital Agenda" initiative adopted in 2010.

The Superfast Cornwall project was designed to provide a solution to the economic challenges faced by Cornwall, the second largest region in the UK ranking amongst the lowest in terms of population density, competitiveness and productivity. Economic growth of the region is hampered by its peripheral geographic position, physical distance from the main markets, a limited local market demand, along with gaps in transport and broadband networks. At the time when the project was discussed, broadband infrastructures were based upon technology, which physically limited the speed, flexibility and quality of connections.

It was the first time that such a large infrastructure was built in a rural area of the UK, but not a novelty in UK ICT strategy. A pioneering PPP project – ActNow – was implemented between 2002-2008 with the aim to promote economic development in the Cornwall region through the use of a broadband information technology. Although small a small scale project, ActNow brought about a change in the business models used to support broadband roll out in UK and was used as a model for other UK regions, as well as a test for subsequent projects supporting ICT take up in Cornwall. Despite the UK investment in ActNow, the Cornish economy was identified – in the framework of EU Regional Policy for 2007-2013 programming period - as requiring "catalyst and transformational interventions" in order to move towards a knowledge based economy. The Cornwall Council started therefore to discuss about a major investment project to be built on the ActNow model, but expanded to bring access to broadband services to households.

Design and implementation arrangements

The PPP between Cornwall Council and the private operator was structured as a private DBO. According to the public actor, this was the best contractual option for the successful achievement of the project objectives. A public sector-led DBO model was initially considered. The public DBO investment model is an extension of the public outsourcing model and it requires a higher contribution from the public, with minimum private sector involvement. Under this model, the private company is awarded the contract for designing and building network infrastructure on behalf of the public, while a separate public-owned company is set up for the management and operation of the broadband network. This model could not have been applied to the Superfast Cornwall, because the Cornwall Council was not in the position to provide the largest share of the investment and was not in the position to take the highest risk burden of being responsible for the financing and maintenance of the network. Moreover, a market investigation indicated that, besides Virgin Media (one of the two main ICT providers in UK along with BT), no other private operators had plans to invest in the Cornwall region and that BT planned to focus on densely populated urban areas only. In the end, the private DBO approach was deemed a good way to minimise the risk for the public actor, while granting almost full control over design, building and maintenance to an experienced private operator.

A key role in the implementation of the project has been played by the Cornwall Development Company (CDC), the Council's arm's length economic development body. CDC was indeed entrusted with the main responsibility of managing the whole programme of activities – including supervising the private operator in the achievement of its targets as well as

coordinating all the initiatives addressed to foster the network up-take. The role of CDC was an innovative practice in the Cornwall Region. It was the first time that the Council was supported by an ad hoc agency to support a specific local development initiative and assist in establishing a dialogue with public and private stakeholders.

The grant competition process followed a competitive dialogue procedure in accordance with the EU Directive 2004/18/EC and UK Public Contracts Regulations 2006. The most economically advantageous tender was selected according to the following award criteria: the amount of public funding required and the amount of private investment (20%), the achieved geographical coverage (20%), the proposed technological solution (20%), the end user applications (15%), tariffs and affordability (15%) and implementation and support services (10%). Operators were left free to propose the technology to adopt. The only indication provided by the Cornwall Council was the objective to reach 100% NGB coverage.

At the outset of the selection process, which started in March 2009, there were 8 companies/consortia potentially interested in the investment. A series of dialogue meetings were held to develop and fine tune the invitation to submit a final bid. Only two competitors were retained for the final selection, which was eventually awarded to British Telecom (BT) on October 2009. Being a major investment project, an application form (including a set of mandatory information amongst which a cost-benefit analysis) was submitted to DG REGIO for the approval of the EU grant. One year was needed, from the selection of BT to the starting of the project, in order to get the approval of the EU grant and the state aid notification by the EC, DG REGIO and DG Competition, respectively.

The Superfast Cornwall was specifically designed as a major investment led by private sector, thus meaning that BT was indicated as direct beneficiary of the EU funds. Accordingly, the grant was calculated by following the 'funding gap' approach, where the public sector finances part of the initiative and leaves the rest of the investment to the private operator. The grant was provided to BT, upon presentation of expenditure claims (including detailed original invoices). This was the most challenging aspect of the project, according to BT. In order to avoid over-compensation of BT, the EC stated that an Executive Group should have been established for monitoring the project on a daily basis. Moreover, a claw-back mechanism should have been included in the contract, according to which BT was required to pay back part of the state aid to the Cornwall Council if the demand for broadband in the region would have grown beyond expected levels. Any extra profit was to be calculated annually and the cumulative calculation, at the end of the project lifetime, used to determine the amount of the state aid to be paid back. BT was also obliged to ensure that at least 10 other operators would have been actively offering services using the new network. The European Commission concluded that Superfast Cornwall was fully in line with EU objectives to foster rapid deployment of NGB networks in areas where private operators had no plans to invest in the following three years. The notification letter was granted in May 2010 and Superfast Cornwall officially started in October 2010.

The overall cost of the project was EUR 153 million. The ERDF grant covered up to 40% of the project costs. According to BT, the ERDF grant has provided the necessary resources to cover the funding gap for the building of the broadband network and the financing of the necessary complementary activities. Such a large investment in a rural area would not have been possible without the support of the public funds.

Table 15: Cornwall superfast - Financing structure of the project

SOURCE OF FUNDING	TYPE OF FUNDING	AMOUNT (EUR)	SHARE OF TOTAL COST
ERDF	Grant	62 million	40%
BT	Own funds	91 million	60%

Although the DBO approach formally allocated the full responsibility of the project to the private investor, a number of measures have been undertaken both by BT and CDC to balance the risks and costs associated to the investment. These are briefly summarised below:

Demand stimulation activities. Wholesale service revenues were expected to cover part of the capital investment and part of the operational expenses of BT. Therefore, the take up of services by existing and future private service providers was critical in assuring the financial viability of the investment. Building on the experience of ActNow, the project design followed a demand-led approach. In addition to the NGB network, a parallel project, funded through the ERDF (EUR 3.9 million) and Cornwall Council (EUR 1.1 million), was implemented by CDC to stimulate the demand for the broadband services. The activities supported included demand stimulation, skills development programme, business support programme, digital inclusion programme, and environmental research.

Leveraging on existing infrastructure. At the time of the project financing, BT was the owner of most of the existing infrastructure in Cornwall – managed through its subsidiary Openreach. This helped to minimise costs.

Technology risk. The BT technology solutions have been part of a mainstream national roll-out plan adopted by BT. This contributed to minimise the implementation risk.

Implementation, performance and achievements

The Superfast Cornwall run from October 2010 to June 2015. The first 50 customers were connected in January 2011. BT initial target was to bring the NGB to 80% of potential clients in Cornwall by the end of 2015. Due to efficiency gains, and high take-up, the target coverage was increased to 95% of premises, while alternative technologies were planned for the remaining 5% of premises located in the Isle of Scilly. In 2015, the extended target was fully achieved. A recent evaluation study has found that the Superfast Cornwall is delivering huge economic benefits. It has provided an estimated GBP 275 million annual boost to the economy of Cornwall and the Isles of Scilly, creating 3 120 jobs and safeguarding 3 430. Moreover, the high-speed fibre broadband has boosted the creation of around 3 300 start-up businesses.

As reported by a research carried out by Plymouth University (2014), the Superfast Cornwall is changing the way of working of SMEs, by increasing their efficiency and productivity. It has enabled the use of technologies which were not allowed or hampered from previous regular connection (e.g. Skype, cloud services, etc.). Other evaluation studies have also found that the Superfast Cornwall is positively impacting on the wellbeing and living conditions of the regional community, by providing citizens with access to new types of entertainment, learning opportunities, more efficient services (online public services), improved health services (e-health for remote areas) and social networks.

It is a widely shared opinion, that the Superfast Cornwall has been a catalyst for the economic growth of the Region and represents a "template" to follow in other rural areas where connecting to broadband is extremely challenging. In general, this investment is commonly described as a good example on how public and private sectors can effectively and efficiently work together to address problems in lagging behind rural areas and deliver solutions. Three main success factors can be identified for this project. The first relates to the role played by CDC. The creation of an ad hoc body has ensured coherence to the whole Superfast Cornwall programme coordination. The second factor is the demand-led approach which was pursued by creating synergies with other interventions. Finally, Superfast Cornwall has built on the lessons learned during the ActNow project.

The evidence collected confirms that the PPP model, and particularly the private DBO approach, has been the most suitable solution for the implementation of the Superfast Cornwall project. Firstly, the involvement of a private operator has provided the needed skills and expertise for the design and implementation of such a technically challenging project. BT's leading expertise for the provision of communications services and solutions in UK has helped to design the project at the cutting edge of technology, to complete it on time, get efficiency gains and exceed initial targets. Secondly, the project has demonstrated that the involvement of the private actor is a key factor in ensuring that broadband infrastructure produces the desired effects on the community. Superfast broadband investment was unlikely to deliver its potential benefits if there had been no service providers interested in exploiting the opportunity to provide more efficient and reliable services to as many people as possible. In this regard, this PPP arrangement has played a crucial role in ensuring access to third party service providers. Thirdly, the involvement of the private sector has guaranteed long-term sustainability. With capital investment and part of the operational cost covered by wholesale service revenues, BT is committed to stimulate and ensure the take up of services by the various users. Finally, the strong monitoring role played by the public actor in achieving value for money and the expected project outcomes was key for the success of the PPP.

The long-term commitment of both public and private partners of the Superfast Cornwall to a 100% superfast broadband deployment in Cornwall has been confirmed by the launch of new investments. Based on the Superfast Cornwall positive experience and building on the collaborations established with different stakeholders, a new PPP project (Superfast 2) has been launched in March 2017 and is expected to run until June 2020. The aim is to extend access to superfast (30+Mbps) to a further 1 200 businesses. An ERDF grant of GBP 8 995 136 (from ERDF Cornwall and Isle of Scilly Programme 2014-2020) has been awarded to Cornwall Council against project costs of £GBP 4 226 473. Matching funds are being provided by the public sector (BDUK and Cornwall Council) and BT.

A3.4 Poznań Energy from Waste Plant PPP

The project factsheet

Country (region)	Poland (Greater Poland region)
Sector	Environment
Programming period of reference	2007-2013
PPP actors	Public authority: City of Poznań Private concessionaire: SITA ZE
Objective of the PPP within the framework of cohesion financing	Infrastructure and Environment (i.e. reducing bio-waste in landfills to 35% of the 1995 level by 2020)
Investment value and Cohesion financing support	Total Cost: EUR 180 million CF grant: EUR 82 million (45%)
Financial structure	CF Grant: EUR 82 million Debt/equity: 80/20, but more precise data is not available. Senior debt provided by a consortium of banks. Equity provided by the Marguerite Fund (50%) and SITA Polska (50%)
Contract agreement between parties	DBFO with a concession duration of 25 years. Availability payments to the private partner
Blending model	CF to joint finance capital expenditures.
Rationale for selection of the case study	Example of multiple funding from ERDF and EIB centrally managed financial instrument (Marguerite Fund)

Introduction and strategic framework

Changes in the Polish waste law made municipal authorities directly responsible for holding municipal waste and managing its disposal. According to the new law, the cost of waste disposal was to be recovered from new municipal waste taxes in order to make the municipal waste management systems effectively self-financing. However, the effects of the 2008 global economic crisis slashed revenues and made earlier investment plans financially unviable. The long-term financial analysis for Poznań showed also that the city carried out a large urban infrastructure investment programme over 2011-2013, mainly associated with the Euro 2012 football championship, which deepened Poznań's debt, so that public financing for a new waste treatment facility was not available. After a comprehensive analysis (2009-2011), including market testing, the city decided to choose a PPP structure to deliver the project. Other options, such as traditional public procurement and a concession model were both deemed less beneficial than a PPP, mainly because the private partners were not prepared to take on demand risk. The necessary public funds came from CF under the OP 2007-2013 and co-financing from the National Fund for Environmental Protection and Water Management.

The Poznań Energy from Waste (EfW) project was the first PPP in Poland on a large scale that successfully combined CF resources with commercial financing. The Poznań PPP has contributed to the achievement of the objectives of the OP "Infrastructure and Environment" (i.e. reducing bio-waste in landfills to 35% of the 1995 level by 2020) by providing a modern waste processing facility for Poznań and the surrounding municipalities. The project had a strong demonstration effect and received several awards, including: "The European Waste Deal of the Year 2013" by the Project Finance Magazine; the Gold Award for "The Best

Pathfinder Project 2013"; and the winner of the competition "The Ecological Investment of the Year 2014" for the biggest PPP project in Poland.

Design and implementation arrangements

Against this backdrop, a PPP contract was deemed to be the most appropriate delivery mechanism for meeting the new environmental requirements concerning waste disposal. The city of Poznań had no previous experience with constructing and running such technologically complex installations and wanted to minimise, or even eliminate, its own financial contribution to the project (The City of Poznań, 2017). The transfer of construction risk to the private partner provided a better guarantee for the timely delivery of the EfW plant, and, more importantly, enabled the city to carry out this PPP project off balance sheet. Poznań made no payments to the private partner during construction, and was only contractually obliged to pay the private partner a gate fee for processing waste in the final construction phase, when the EfW plant was coming on stream and being technically tested. The concession model was found to be unsatisfactory, as potential concessionaires did not want to take over the demand risk from the public partner.

The Poznań project was strongly supported by the Ministry for Regional Development (MRD). In 2009, the Ministry commissioned a feasibility study[67], followed in 2010 by an expert group audit of thermal waste processing plants. These studies showed that the Poznań project was the most feasible to carry out, and so it was designated as a pilot project by the MRD. The project received comprehensive financial support from the PPP Platform[68] over 2011-2013, which included financial, legal and technical advisory services to design and manage the tendering process. The main task of the advisory group was to finalise the institutional model of the project according to the regulations covering the implementation of the CF during 2007-2013. As a beneficiary of EU funds, Poznań received support for market testing, risk model analysis, and a PSC analysis.

The project was conducted within the legal framework of the PPP Act of 19 December, 2008, with the private partner selection procedure. It involved establishing a special purpose vehicle (SPV) that would be responsible for designing, building, financing and operating the EfW plant during the 25 years of operation, which would cover municipal waste utilisation and disposal (energy/heat cogeneration). The PPP followed a DBFO contract where remuneration to the private contractor was to be based on availability payments. Owing to the PPP model used, the city was given full information on the operational costs of the plant, as the private partner included all operational risks in their final price offer. The call for tenders for the PPP project was published on 4 April 2011. The main bid assessment criteria were defined to include: the cost, the tasks and risks sharing between the public and private partners, and the schedule and amount of payments required from the public partner (IPPP, 2014a). It is also reported in the literature that the award criteria put particular focus on the "NPV of the availability fees offered by the bidders" (Heddesheimer, 2014). Eleven bidding consortia submitted expressions of interest. Five of them were invited to engage in a competitive dialogue, which consisted of five rounds of comprehensive discussions of the technical, financial and legal aspects of the project with all five bidders on strictly equal terms. Three companies submitted their bids in December 2012 and SITA Zielona Energia (ZE)[69] was selected to deliver the project.

[67] "The Waste Management System for the City of Poznań."
[68] A cooperation platform for public private partnership established on the initiative of the Ministry of Infrastructure and Development.
[69] SITA Zielona Energia was established by SITA Polska (50% of shares) and Marguerite Waste Polska (50% of shares).

The SPV was initially 100% owned by SITA Polska, with the EU investment fund Marguerite eventually acquiring 50% of the stake. The SPV is at the centre of the contractual structure of the project. It is solely responsible, on a non-recourse basis to the city and creditors, for providing commercial financing for the project. The SPV handled the plant construction contract with Hitachi Zosen INOVA and is responsible for direct commercial dealings with the heat, power and green certificate off-takers, and with other relevant entities to recycle the waste or waste residue.

The hybrid financing route posed practical problems, as an EU grant for such a large infrastructure project had to be approved as a major project by the EC. The EC decision on grant approval for the project was given only in early 2015, about two years after the selection of the successful bidder. As the City of Poznań was uncertain about the availability and final amount of the CF grant when the bidders were required to submit their offers, the bidders were asked to structure their financial offers on a no-EU grant basis. The reason for that was that Poznań did not have the financial resources to compensate for the grant amount, should it be unavailable. To address this uncertainty, the city committed to going ahead with the project "independently of EU funds" (Heddesheimer, 2014). The grant provision was subject to two conditions: the achievement of financial close under the PPP contract, and the delivery of JASPERS advice on the nature of the project beneficiaries. In this set-up, the private partner was defined as an entity entitled only for reimbursement of the eligible expenses as per the OP, which were incurred by the private partner to cover payments to their sub-contractors (IIPP, 2014ab). This aspect proved challenging to manage, because the local authority had to separate investment and operational expenditure during the tendering phase to prevent the latter from being covered by the EU grant.

The grant, if and when given, would have been used to replace a part of the senior debt. From the financial backers' perspective, the uncertainty of grant availability was not problematic, and the risk profile was the same as it would have been with a grant factored in, but the debt exposure of the borrower would have been different in each case. The bidders had made their offers on a no-grant basis, so they had more debt exposure with no grant, but less with the grant available in the financing structure. Obtaining the CF grant was very important for the city. It would have been Poznań's own contribution to the project and would have helped reduce the investment cost of the entire project, because the private partner's remuneration was based on a "no better/no worse principle". These benefits would have been then passed on the local taxpayers through lower tax rates.

The PPP procurement and the EU cohesion grant application phases were running in parallel to the Poznań project. When the EU grant became available, SITA ZE cancelled part of its financing and was refunded by the city for the eligible construction costs. SITA's remuneration stream was also adjusted downwards according to the financial model included in the PPP contract to meet the contractual Internal Rate of Return (IRR).

The overall cost of the project was about EUR 182 million (Table 16). The CF grant was channelled into the project through the city of Poznań as the grant recipient. The city was also responsible for providing the perpetual usufruct of the land for the EfW plant, that was eventually sold (JASPERS, 2017). The financing structure of the project consisted of two main elements: commercial debt and equity. Long-term, non-recourse senior debt was provided to SITA ZE (i.e. the SPV) by a consortium of three Polish banks: Bank Pekao, Bank Polski, and Bank Gospodarstwa Krajowego. The equity contribution came in two equal parts from Marguerite and SITA Polska, with a contingent equity contribution available, with the debt to equity ratio at 80:20.

Table 16: Poznań EfW - financing structure

SOURCE OF FUNDING	TYPE OF FUNDING	AMOUNT (EUR)	SHARE OF TOTAL COST
EU CF	Grant	82 million	45%
Commercial banks (BGK, PKO BP and Pekao SA)	Senior debt	Not available	Not available
Marguerite	Equity	Not available	Not available
SITA Polska	Equity and senior loans	Not available	Not available

The transfer of major risks to the private partner was a key reason behind adopting a PPP structure by the city. The partners have agreed to divide the risks between them in such a way that each PPP partner took on those risks that it could best manage. Accordingly, the city took on the demand risk, and the private partner the construction and availability risks (The City of Poznań, 2017). This arrangement facilitated the participation of commercial lenders.

The payment mechanism entitles SITA ZE only to monthly availability fees for the municipal waste processing services rendered to the city under the PPP contract. The fees include two components. A fixed base fee that covers the construction costs and financing costs (set in the bidding offer, with no escalation), and the EfW plant running costs. A variable fee is based on the tonnage of delivered and processed waste, and it covers the variable costs involved (e.g. ash disposal). Both fees are periodically adjusted for inflation. SITA ZE guarantees energy production based on the amount of waste delivered and its calorific value. All revenue from sales of heat, electricity and green certificates produced by the EfW plant will be passed through to the city under the PPP contract to prevent undue windfall profits from these sales for the private partner (Heddesheimer, 2014). That is why the gate fee is lowered by the revenue amounts that SITA ZE gets from heat and electrical energy generation, and from the sale of recycled material. SITA ZE may also be penalised by payment deductions for underperformance of its services to the city of Poznań.

Implementation, performance and achievements

The EfW was delivered as planned. The implementation of the PPP contract did not pose serious problems. The innovative approach arranged by the private partner to blend the CF grant with commercial financing has helped in running a smooth PPP procurement process. The financial model built into the PPP contract allowed for an efficient adjustment of the key financial parameters without incurring in onerous contract renegotiations. SITA ZE had a very efficient financial management system. The payment schedule to the construction contractor was not affected by the availability of the CF grant, as SITA ZE had decided at the project outset to have an independent financing stream, and to recover its costs from the city only afterwards. Regular monthly payments by SITA ZE to the building contractor were also an additional incentive for timely delivery of the construction works.
The delivery of the EU grant increased the benefits of the project for the city, the private partner, and the local taxpayers. The benefit for the residents is reflected in lowering the gate fee, which the private operator charges for processing the waste delivered by the city.

The gate fee is lower for waste generated by local residents, as it is subsidised by a portion of the CF grant, whilst it is higher for the waste coming from commercial users and from public municipal spaces, as that waste cannot be subsidised by the CF grant. In this sense, that PPP project is unique, as the tangible benefits provided by the CF grant are directly passed on to the final beneficiary (SUEZ, 2017). The private operator, SUEZ Zielona Energia (SUEZ ZE), also considered the support provided by the CF essential in the PPP development. Commercial lenders also confirmed the positive role played by the CF grant, as it helped reduce the debt exposure of the private partner in the PPP, which was initially quite high (BGK, 2017).

Since the operational phase of the project started only in December 2016, it is too early to pass definitive judgement on all success/failure factors of the project, but it is already clear that the PPP procurement route has significantly contributed to the successful delivery and operation of the EfW plant. According to the stakeholders involved in this project, it is unlikely that a traditional delivery mechanism would have delivered the same or better financial and operational advantages to the city than a PPP. The main advantage of the chosen PPP structure compared to other delivery methods was the transfer of the financing risk to the private partner.

Strong political and administrative support for the project, both from the city of Poznań and the central authorities, have contributed to its successful implementation, which was also underpinned by good cooperation between the private and public partners. The city of Poznań has to be commended for their rock-solid determination in seeing the PPP project through, given that the waste ownership regulations in Poland changed only in 2012 and had created a new, and still untested, framework within which the PPP project was being carried out.

Efficient PPP preparation and tendering of the project by the local authorities, supported by a consortium of experienced legal, financial, and technical advisers, was a decisive factor in achieving success (IPPP, 2014a). Technical advisers played an important role during the competitive dialogue phase, as they discussed the optimal technical and technological details of thermal waste processing with the bidders. The experience derived from that helped them draw the functional-technical programme, which became part of the final technical specification of the project for the EfW plant constructors (The City of Poznań, 2017). The clear design of the contractual PPP arrangements which involved an experienced private partner, a world leader in waste management, a reliable financing structure supported by reputable financial institutions, a precisely designed and implemented construction schedule, which was supported by a reliable stream of commercial financing, have all decisively contributed to the success of the project so far. Finally, the timely delivery by the authorities of key decisions and permits required to construct and operate the EfW grant has been another strong enabling factor in this PPP project.

The Poznań PPP has had a strong showcase effect in Poland. Several local authorities are now considering similar PPP projects (e.g. City of Gdańsk). However, it has become clear that Poznań-like PPP projects cannot be done by a single local authority, because it is only economical for a group of local authorities to carry out such projects together in order to reach sufficient economies of scale (JASPERS, 2017).

A3.5 Sopot railway station

The project factsheet

Country (region)	Poland (Pomerania)
Sector	Urban development
Programming period of reference	2007-2013
PPP actors	Public authority: City of Sopot Private partner: Baltic Investment Group SA
Objective of the PPP within the framework of cohesion financing	Support to integrated sustainable urban development through a JESSICA financial engineering instrument, in line with the priorities of the Pomorskie Regional OP
Investment value and Cohesion financing support	Total Cost: EUR 26.7 million JESSICA loan: EUR 9.8 million (36.6%)
Financial structure	BGI (private sponsor): EUR 16.7 million EU-JESSICA: EUR 9.8 million (soft loan) BGK (bank): 1.2 million (working capital facility)
Contract agreement between parties	DBFO (100% financed by the private partner), with a concession duration of 8 years.
Blending model	ERDF resources channelled by a Financial Instrument
Rationale for selection of the case study	The first PPP in Poland co-financed by JESSICA. The financial engineering of the project is unique in Europe

Introduction and strategic framework

The Sopot railway station is an example of urban development project implemented through a PPP model, which substantially contributed to the re-development in a coherent and sustainable manner of a degraded urban space. It was the first PPP in Poland co-financed by a financial engineering instrument (an urban development fund) promoted by the JESSICA initiative [70] and the financial engineering of the project is unique in Europe. It was the first PPP in which the private partner was able to use a low-interest investment loan from the EU JESSICA initiative, which was available under the OP the Pomorskie Region over the 2007-2013 programming period (Eurobuild CEE, 2017; Zawadzka, 2011; Mejssner, 2013).

The City of Sopot is a main seaside tourist destination in Poland. The Sopot Local Authority was the owner of the land where the Sopot railway station had been built in the 1970s. Part of that land had been leased in perpetuity (as usufruct) to the Polish National Railways S.A. (PKP). The area gradually degraded and became a shabby inner-city spot. In December 2008, the city authorities and the PKP signed an agreement to re-develop the railway station, revitalise the surrounding area, and provide a complex solution to the transport problems in that part of the city, particularly to provide better access routes to the station and parking spaces. The main interest of the Sopot local authorities was to achieve tangible infrastructure improvements in the public urban space around the railway station in order to provide public amenities for the city's residents and visitors. The main interest of the PKP was to create a new and modern railway station. Overall, the project was deemed to bring about several socio-economic and environmental benefits.

[70] JESSICA's main objective was the financing of sustainable urban development (projects and PPPs part of integrated plans for sustainable urban development) with EU cohesion resources available to MS from their structural funds allocations. JESSICA was delivered by contributions from the European Regional Development Fund (ERDF) via financial instruments (FIs) managed by Urban Development Funds (UDFs) through a revolving mechanism administered by a specialised intermediary.

As neither the Sopot Local Authority nor the PKP had the financial and technical means to support the project, they both decided to involve a private partner. The involvement of a private partner was also motivated by the success of a previous PPP project implemented by the city authorities, the shopping mall "Haffner Centre", which brought about a substantial re-development of the city centre. Another strong factor in favour of the PPP model was the off-balance-sheet treatment of the project expenditures.

The specific Cohesion Policy framework for the Sopot PPP project was provided by the provisions of the Regional OP for the Pomorskie Region in the 2007-2013 programming period. The project met the OP eligibility criteria and also benefitted from additional support available from the EU JESSICA initiative, which was implemented in the Pomorskie region under Priority Axis 3 "City and metropolitan functions", Measure 3 "Infrastructure of urban development".

Design and implementation arrangements

In designing the project, the City consulted the local population via questionnaires meetings and open days. The City also established a separate administrative structure for developing the project concept and the analysis of the risks involved. A tender committee made up of the city administration and PKP staff was set up for the selection of the PPP private partner (Platforma PPP, 2016). Both public partners commissioned their own economic, tax, and legal analyses to choose an optimal project structure. The consultants hired by the city suggested two options for the project: a PPP agreement or a partnership agreement with a private partner, based on the commercial law. Full financial economic and legal analyses convinced the city that the PPP model would have been optimal to achieve its objectives. The external advisers were primarily tasked with designing an optimal PPP structure and defining the benefits for the public partners, carrying out negotiations with potential business partners, and preparing draft agreements with the selected private partner. The City also appointed a legal adviser to oversee the various legal aspects of the PPP project.

As both public partners had no financial resources to invest in the project, the equity contribution had to come from the private partner. Therefore, the choice of a DBFO PPP approach, with the private partner responsible for operating and managing the project during an 8-year concession period, was deemed optimal by the public partners. The procurement route used by the city was based on the concession model described in the PPP Act, since a concession payment mechanism was to be used in the Sopot project. Specifically, the only remuneration for the private partner in the PPP was to be the revenue from the retail and commercial entities built on the land owned by the private partner (e.g. sale or rent income from shops and the hotel, income from parking charges), with the exception of the railway station and the communication routes, whose ownership was to be retained by the PKP and the city, respectively. No lump sum payments for the private partner from the public partner were allowed. Land and building ownership issues had to be addressed in the PPP contract to transfer land ownership to the selected private partner in exchange for modernising and creating public spaces. Under the foreseen payment mechanism, the private partner would undertake to pay the public party a cash premium for being able to invest in the public space and to pay for the PKP land/buildings.

There was no SPV in the PPP structure chosen by the public partners, so the only two parties in the agreement were the city of Sopot and the private partner. The prospective private partner had to satisfy strict economic, financial and technical conditions and only two tender offers were submitted. The negotiations between the tender committee and the two companies lasted 8 months and BGI (Baltic Investment Group SA) was finally selected. The project had a final budget of EUR 26.7 million and an estimated rate of return of 11.56%,

which was acceptable to all parties. BGI had over 1 year from the time of signing the PPP contract to top up its own equity contribution with sufficient credit to achieve financial close. The project financial structure included a JESSICA soft loan from ROP ERDF resources, which was critical to achieving the financial closure of the project. The JESSICA soft loan was extended to the BGI and helped the private contractor leverage its own equity contribution to the project.

Table 17: Sopot railway station - financing structure

SOURCE OF FUNDING	TYPE OF FUNDING	AMOUNT(EUR)	SHARE OF TOTAL COST
EU-JESSICA (via BGK)	Loan	9.8 million	36.6%
BGI	Equity	16.7 million	63%
Working capital facility (BGK)	Loan	1.2 million	0.4%

The city decided to exploit the opportunity of a JESSICA loan because the loan conditions were particularly favourable. The availability of the JESSICA loan also favoured the possibility of getting commercial co-financing for the project from BGK. In applying for a JESSICA loan to the Pomerania Development Agency, the BGI had to comply with several EU Cohesion Policy and JESSICA conditions. The BGI had to prove both the commercial nature of the project, which would guarantee a rate of return sufficient for the loan repayment, along with the project social relevance, whereby the outcomes of the project would benefit the local population and contribute to improving their standard of living. The BGI application for the JESSICA loan satisfied the Cohesion Policy conditions attached to such loans, but it took one year to complete the process.

Under the contract, the city undertook to acquire the usufruct and ownership rights to the PKP assets, clear the necessary legal titles, and transfer their ownership to the BGI. The private partner undertook to finance the whole operation, including the risks related to design, construction, management and operation. Most of the risks were contractually transferred to the BGI, and the contract included penalty clauses for delays or non-delivery. The City Tender Committee became the PPP Supervisory Committee for the duration of the project.

The only risk that the public party took on was related to the timely transfer of the real estate assets (land, buildings) to the private partner. The public actor was also responsible for any physical or legal defects reducing the value or the usefulness of the assets before the signing of the contract that transferred the rights to the real estate, with the exclusion of the defects that the private partner had detected or could detect before the conclusion of the PPP contract.

Implementation, performance and achievements

The project was delivered on time and on budget, and there were no implementation problems. There was no need for any re-negotiation of the PPP contract and the infrastructures were delivered according to the agreed technical specifications. Thus far, the public partner has achieved its expected goals of transforming a degraded part of the city into a modern and more attractive neighbourhood, without impacting on the city budget. For

Sopot, a major advantage of the PPP procurement route was that an entire area around the old Sopot railway station could be revitalised in a comprehensive and architecturally coherent manner, without using public resources (The City of Sopot, 2017). To achieve the improvements envisaged by the city, it would have been impossible to attract private investment outside a PPP formula, due to insufficient profitability of other options and lack of commercial incentives. However, at present, the private partner has not achieved its profit targets, as the commercial retail space has not been fully leased yet, although ongoing efforts suggest that full commercial occupancy will be achieved soon (The City of Sopot, 2017).

The success of the PPP arrangement can be attributed to the city's ability to involve all stakeholders in the preparatory and subsequent phases of the project. Good cooperation between the city and the private partners started in the presentation phase, as the City was able to give the potential investors very detailed information of what it wanted to achieve, including the formal Spatial Development Plan. Political stability during project implementation also helped reduce the political risk. Other enabling factors included a consistent national legal framework for PPPs, the maturity of the Polish financial system, the catalytic role of the commercial lender involved in the PPP arrangement and the technical assistance provided to the city's staff by the external advisers selected at the beginning of the preparatory phase.

The availability of ERDF funds via a financial instrument (urban development fund) established through the JESSICA initiative was a key factor in facilitating the financial structuring of the PPP and reach financial close for the private partner. Cohesion Policy support for the project was possible because the project pursued social and economic objectives related to urban development. The JESSICA loan delivered substantial advantages to all the involved stakeholders. Firstly, it increased investment profitability for the BGI. Secondly, it enhanced the marketing profile of the project and made the project a showcase for PPP use in Poland within the context of Cohesion Policy. However, the long time for getting the agreement of the JESSICA loan was discouraging for the private partner, because it created uncertainty about the assessment of the financial risk.

A3.6 Biarritz Cité de L'Ocean

The project factsheet

Country (region)	France (former Aquitaine, currently Nouvelle-Aquitaine)
Sector	Urban development/culture
Programming period of reference	2007-2013
PPP actors	Public authority: City of Biarritz Private partner: VINCI Construction France
Objective of the PPP within the framework of cohesion financing	Turning innovation and sustainable development into engines for regional competitiveness and the project of Biarritz Océan met several thematic objectives of the Regional OP.
Investment value and Cohesion financing support	EUR 41 million ERDF (2 grants): EUR 3.7 million (7.16%)
Financial structure	VINCI: EUR 24 million City of Biarritz : EUR 15.820 million ERDF: EUR 3.7 million Region: EUR 2 million Department: EUR 2.3 million State EUR 0.856 million Dexia: EUR 5 million
Contract agreement between parties	BOT with operations transferred to a third party (Société d'économie mixte Biarritz Océan) Remuneration of the private partner based on availability payments on a period of 30 years.
Blending model	ERDF grant to finance specific eligible expenditures
Rationale for selection of the case study	A small scale and highly controversial PPP that was eventually terminated for lack of legal foundations

Introduction and strategic framework

The project Biarritz Cité de l'Océan is a case of failed PPP. This ambitious project of creating a touristic attraction pole, meant to guarantee added value to the city in terms of yearly visitors, turnover and attractiveness, sparked an intense institutional debate on the viability of PPPs. The discussion engaged the municipality and several French institutions for years in analysing how appropriate the choice of a PPP was to the case, and, more in general, as a way to fund public infrastructure across the country.

Biarritz is a city on the South West coast of France, part of the Pyrénées - Atlantiques department in the Nouvelle - Aquitaine region. The development of tourism infrastructure has always been a pivotal point for the city administration. An important concern has always been to boost tourism beyond the summer holidays to create a more solid tourist-based economy. For this reason, since 2004, the City Mayor began thinking about building a major tourist attraction following the example of the Guggenheim museum in Bilbao. Biarritz Océan was intended to become a scientific, environmental and touristic point of reference and aimed at i) improving the attractiveness of the city, ii) becoming a hub for scientific research concerning ocean protection against physical, chemical and biological risks within the context of climate change, iii) contributing to the sustainable development of the city, and iv) define the city identity, by recognizing its special relationship with the ocean.

The project Cité de l'Ocean was developed through different phases. In 2004 the city launched a competition for the construction of "Cité du Surf et de la Mer", a cultural and scientific space, dedicated to the study and research of the ocean. In 2007, it was decided to proceed also with the renovation of the Musée de la Mer, the 1933 Aquarium and, most importantly, to combine the two projects into a single investment, moving from a traditional procurement route[71] to a PPP approach. At this point, the scheme took a somehow atypical course: for one site (Musée de la Mer) it was decided to initiate a competitive procedure to select a contractor and architect, while for the other site (Cité de l'Océan), an architecture company (Steve Holl) had already provided the concept and the planning and had to accept the transformation of its private contract into a PPP[72].

Design and implementation arrangements

In order to set up a PPP, the public authority needed to undergo different assessments. Firstly, Biarritz's city council referred to the SCET, a subsidiary of the Caisse des Dépôts et Consignations, that assists local authorities in the fields of development, service management and real estate. SCET carried out a financial evaluation based on the comparative analysis between a public procurement and a partnership contract, finding the latter more convenient (SCET, 2007). Secondly, the PPP proposal needed the opinion of the MAAP (Mission d'appui aux partenariats public), which determined that the project presented the element of "complexity" as requested by both the EU Directive 2004/18 and the French law[73], to be pursued through a PPP arrangement. MAPP also found that the comparative analysis was carried out in an appropriate manner, revealing a clear advantage of the PPP solution.

After 16 months of "competitive dialogue" the call for tender was awarded to VINCI Construction France, whose offer was deemed the best one not only in terms of costs and technical expertise, but also because it foresaw a close collaboration with local enterprises. The PPP contract was designed to deliver over 30 years the following services: i) for the Cité de l'Océan, the financing of the project, the construction of the building and of its technical equipment and the overall maintenance, as designed by Stephen Holl, and ii) for the Musée de la Mer, the financing of the project, the design, restructuring and the overall maintenance. In 2008 the city signed a PPP contract with Biarritz Océan snc, a SVC, whose capital was held by VINCI Construction France. The deadline for completion of construction was set at 29 months. Initially, the project investment costs amounted to EUR 35.72 million, but the out-turn investment cost amounted to EUR 41 million, of which EUR 17 million were given in public grants and EUR 24 million were invested by Vinci (Table 8).

[71] MOP, maîtrise d'ouvrage publique.

[72] The architecture company Steve Holl had already been selected when the city launched a competition for the construction of "Cité du Surf et de la Mer",in 2004

[73] Article L. 1414-1 du code général des collectivités territoriales. According to the French regulatory framework in force at the time, a PPP would be defined as an administrative contract under which the State or a State-run entity entrusts to a third party, for a period set according to investment amortization or agreed financing terms, a comprehensive project related to the construction or conversion, upkeep, maintenance, operation or management of works, equipment or intangible assets necessary to public service, as well as to the total or partial financing of the latter, with the exception of any form of equity financing.

Table 18: Cité de l'Ocean - financing structure

SOURCE OF FUNDING	TYPE OF FUNDING	AMOUNT(EUR)	SHARE OF TOTAL COST
ERDF	2 Grants	3.7 million	7.16%
State	Grant	0.856 million	1.65%
Region	Grant	2 million	4.45%
Department	Grant	2.3 million	5.6%
City of Biarritz	Grant	15.820 million	30.6%
Vinci	N/A	24 million	46.5%
Dexia	Term loan	approx. 5 million	4.04%

The project received two ERDF grants from the Regional OP 2007-2013. In particular, the Musée de la Mer got a grant of EUR 1 650 641 under the thematic priority "sustainable development and risk prevention", and the Cité de l'Océan received a grant of EUR 2 098 643 under the thematic priority "Innovation, ICT". The rationale to use ERDF funds was based on the objective of turning innovation and sustainable development into engines for regional competitiveness and the project of Biarritz Océan met several thematic objectives. However, it is important to notice that the use of ERDF was not planned when the PPP was designed and the two processes ran in parallel. The ERDF grant was paid in two instalments and suspended during the litigation period. Following the Court ruling, both ERDF grants have been analyzed by the Commission interministérielle de coordination des contrôles, the French audit authority for European funds, which considered that the funds comply with the Public Procurement Code. Nonetheless, a financial penalty of 5% was applied.

Importantly, the operation of the sites wasn't part of the PPP arrangement. The city of Biarritz intended to delegate the exploitation of the facilities to a third entity (Société d'Economie Mixte Biarritz Océan) led by the Mayor of Biarritz and whose shareholders were the Caisse des Depots et Consignations, the Communauté d'Agglomération Côte Basque Adour and the Municipality of Biarritz, in exchange of a yearly fee of EUR 1.8 million per year, which later became EUR 2.1 million per year, equal to the fee to be paid every year to Biarritz Ocean (Vinci) for 30 years.

Very little information is available concerning risk allocation, however it seems clear that the city was far too exposed on the exploitation and commercial/revenue sides, bearing the whole risk linked to lower-than-expected turn-out of visitors and tourists. The initial projections were that around 500 000 visitors a year would be attracted by the two museums, which proved to be very optimistic, as in reality attendance never exceeded 320 000 (up to 2016). This was indeed one of the main reasons why the PPPs raised much discontent and political debate at city level. At the same time, it seems that the regulatory risk hadn't been foreseen at all, which heavily impacted both the public and the private partners.

Implementation, performance and achievements

The Cité de l'Océan is a relatively small building, but its design is complex and sophisticated. In spite of technical difficulties, works were completed on time and Biarritz Océan opened to the public in June 2011. In 2012, the regional court of auditors found out that the city of Biarritz lost already EUR 468 000 that year, which became EUR 680 000 in 2013, due to the fact that annual demand level was overestimated at project appraisal by approximately 35%.

The PPP arrangement had already raised several concerns. On August 5th, 2008 Jean-Benoît Saint-Cricq – a member of the political opposition since 2001 – and other city councilors, firmly contested the project, starting a legal battle based on the consideration that the PPP contract did not respect the fundamental elements required by the French law. They firstly referred to the Administrative Court of Pau asking to cancel the City Council decision authorizing the PPP and to order the suspension of the proceedings, but the Court rejected all their requests. On August 31st 2010, the councilors appealed the Court of Pau's decision before the Bordeaux Court of Appeal. On July 26th, 2012, the Bordeaux Court of Appeal suppressed the decisions of the Court of Pau and the City Council decision by which the PPP was authorized. The City filed an appeal before the Supreme French Court for administrative proceedings, which, in 2014, stated that the City of Biarritz was not in a position to provide sound evidence of the project complexity, or of the technical and financial constraints to project implementation. Because the project did not meet the criteria required by the law to conclude a PPP agreement, the court cancelled the decision of the City Council that authorized the signature of the PPP. Following the legal instability created by the court's decision, on July 2015 the City Council decided to terminate the PPP and approved a resolution compensation of EUR 70 000 to Vinci[74].

From January 1st 2016 the City is owner of both sites and the council decided to launch a 3-year plan including a capital increase of EUR 1.6 million and new shareholders. In 2017, the City of Biarritz agreed to a further allocation of EUR 150 000 in order to allow the site to remain in operation in the current year. Under the new arrangement, the Société d'économie mixte Biarritz Océan, which was already exploiting the two sites, also assumed maintenance tasks, leading in 2015 to around EUR 150 000 in savings for the City. At the same time, developments of new content and marketing materials for the museum led to an improvement in the performance of the sites, with a 22% increase in the turnover of the Cité de l'Océan and a 6% increase for the Musée de la Mer in 2015, and a further 5% increase for both facilities in 2016.

The PPP Cité the L'Océan presents several important causes for reflection. From the point of view of Cohesion Policy, the project was in line with regional priorities, and no major problems were encountered in blending different sources of capital into the PPP. However, it appears from the timeline of the decisions that the city's focus (and in particular the Mayor's ambition) was in the establishment of a major point of attraction, rather than in determining the most appropriate legal and financial structure for an urban renewal project. Indeed, the project began with the design of the new Cité building – of which every architectural and economic element was hence defined and foreseen, and only after some years – following strong political debate, it was extended to the restructuring of the Museum. At the same time, while the Supreme French Court found that the city of Biarritz was not in a position to provide sound evidence of the project complexity, or of the technical and financial constraints to project implementation, which are required to justify a PPP contract, the city had previously obtained two different approvals from two different State agencies. The city relied on these

[74] Originally EUR 305 000, EUR 235 000 were deducted for outstanding maintenance and renovation works which were incomplete at the time of rescission.

positive opinions, only to find itself entangled in a legal procedure eventually resulting in an annulment. The administrative Supreme Court found that the PPP lacked the necessary complexity elements which were required by the French law for justifying the use of the PPP procurement route. The Court decision brought about some uncertainty, especially with regard to the MAPP evaluations. As underlined by the French Court of Auditors in its 2015 report, the PPP risk assessment can lack in rigor, leading sometimes to inopportune PPP choices.

A3.7 Bratislava by-pass D4R7

The project factsheet

Country (region)	Slovakia (Bratislava)
Sector	Transport, road
Programming period of reference	2014-2020
PPP actors	Public sector: Ministry of Transport, Construction and Regional Development of the Slovak Republic Private sector: Project Concessionaire Zero Bypass Ltd formed by Cintra infraestructuras Internacional S.L., PORR AG and Macquarie Corporate Holdings Pty Limited
Objective of the PPP within the framework of cohesion financing	Trasport projects are a priority in the OP. Importantly, however, the R7 segment is not part of the TEN-T, and the D4R7 project was not described as a major project in the regional OP.
Investment value and Cohesion financing support	EUR 1 066 million ESIF (subordinated loan): EUR 28 million (3%)
Financial structure	EIB (with EFSI guarantee): EUR 426 million EBRD (debt): EUR 148 million Commercial banks: EUR 377 million (senior debt) and EUR 87 million (equity) ESIF (through Slovak Investment Holding, SIH): EUR 28 million
Contract agreement between parties	DFBO. Availability payment PPP with a concession period of 30 years
Blending model	Financial Instrument co-invested alongside senior debt and equity
Rationale for selection of the case study	Blending of ESIF and EFSI in a PPP project supported by Cohesion Policy

Introduction and strategic framework

The D4R7 PPP project involves designing, financing and constructing 27 km of the D4 motorway that will connect to the 37 km R7 expressway, thus forming a bypass ring-road around Bratislava. The D4R7 is an availability payment-based PPP with a concession period of 30 years. It has been classified by the Slovak government as a national priority in supporting economic growth and social cohesion, in both the city and the region, by providing a new high-capacity bypass route around Bratislava to help ease current congestion on the existing road network. The D4 motorway is also part of the trans-European transport network (TEN-T).

The project can be considered to be innovative in several respects. It is only the second PPP project in the transport sector in Slovakia, so its signalling and demonstration effects can be viewed as considerable for future projects of this type. It is the first project in Slovakia to be supported by an EFSI guarantee, and the first that blended ESIF and EFSI financing. The Bratislava bypass is the first use of an FI under the ESIF in Slovakia. It is deployed via a specialised holding fund structure, the Slovak Investment Holding (SIH), managed by the SZRB Asset Management (SZRB AM), that has been set up by the Slovak authorities to implement FIs in the country under the ESIF policy objectives. The D4R7 project was the second PPP in the transport sector in the Slovak Republic, following the R1 motorway

construction project, for which the financial close was achieved in 2009. While the R1 motorway is already operational, the D4R7 motorway still is under construction.

Design and implementation arrangements

The Slovak Ministry of Finance (MoF) signed an advisory contract in September 2014, and a feasibility study of a ring-road project was delivered by an international consortium comprising PwC (financial), White & Case (legal) and Obermeyer (technical) and accepted by the MoF at the end of October 2014. The study showed that the optimal delivery method for the project would be via a PPP structure. Several factors influenced the Slovak government's decision to use a PPP model. One was the outcome of a VfM analysis. Another was the fact that ESIF grant funding had already been allocated to other projects, so other forms of financing had to be considered. The government also believed that demand for the new D4/R7 infrastructure would be high and attractive to private investors. Finally, fiscal treatment of project expenditures (i.e. off-balance sheet financing in compliance with Eurostat regulations) was also a key determinant in favour of the PPP option, because constitutional law prevents public administrations from increasing public debt above a defined threshold.

It is important to note that the VfM analysis for the project was performed at least twice before the commercial close. According to the financial modelling performed by the D4R7 project promoter, the original VfM suggested considerable savings in all scenarios considered, as compared to other state budget financing. An updated VfM analysis commissioned by the MoF (MoF, 2016), provided a more conservative, but still positive, view. More importantly, the analysis showed that the impact of the project on public finances over 2015-2050 would be higher with a traditional procurement route (EUR 1,126 million, or 1.44% of GDP) than with a PPP (EUR 1,051 million, or 1.35% of GDP). The PPP approach was also deemed better for faster project delivery (MTCRD, 2017).

Under the PPP structure used in this project, a special purpose company was set up to design, build, finance and operate the new D4 motorway and the R7 expressway during its 30-year concession period. In January 2015, the PPP proposal was approved by the Slovak government, and a public procurement note to select the concessionaire was posted on 30 January. Nine international consortia applied, with four shortlisted on 12 June 2015. The offer of the consortium called Zero Bypass Ltd. (made up of Cintra Infraestructuras Internacional, S.L., PORR AG, and Macquarie Corporate Holdings Pty Ltd.) was selected after several competitive dialogue sessions.

The total value of this project was EUR 1 066 million. The financing structure of the project included three types of finance. Most of the financing was provided by the EIB, which would not have been possible without an EFSI guarantee. The ESIF contribution came into the project via a financial instrument in the form of a mezzanine loan. It was offered on the same terms and at the same time to all bidders before the final "information document within the competitive procedure" was published (MoF & MT, 2017). The ESIF loan played a vital role in achieving financial close, because senior lenders require equity contributions from the promotor in this type of transactions, and the subordinated loan could be treated by them as equity replacement. The ESIF loan also came on better terms than the cost of capital would have come, reducing the financing costs for the promoters. The grant approach was ruled out, as its amount would have been uncertain, and it would have brought in a fairly modest contribution at best (EPEC, 2017).

Table 19: Bratislava by-pass D4R7 – financing structure

SOURCE OF FUNDING	TYPE OF FUNDING	AMOUNT (EUR)	SHARE OF TOTAL COST
EIB (with EFSI guarantee)	Senior debt	426 million	40%
EBRD	Senior debt	148 million	14%
Commercial banks	Senior debt	377 million	35%
Slovak Investment Holding (ESIF)	Quasi-equity (subordinated loan)	28 million	3%
Commercial banks[75]	Equity (bridge loan)	87 million	8%

The procurement phase had a critical impact on reducing the costs of the project. This was achieved by an efficient competitive dialogue, resulting in the optimisation of the project technical specifications by the bidders, and a subsequent budget reduction of 30% compared to the initial scenario. The availability of the subordinated debt, structuring the commercial-term loan in attractive three tranches, together with the financial involvement of the EIB (EFSI), EBRD and the SIH (ESIF), all helped attract investors and achieve lower bid prices (Brazda, 2016; Lazarovitch, 2017).

Under the PPP structure used in this project, there is no recourse to the public promoter in the events of default on debt repayments, which in this case are also heavily underwritten by the EFSI guarantee. The public partner will extend annual availability payments of EUR 56.7 million to the private partner, based on the quality of service provided to the public. No payments will be made, if the SPC fails to provide that service.

At the time the PPP procurement route was being designed, INEKO, a Slovak research centre on socio-economic themes, raised a number of issues that questioned the PPP choice (Kovalčík and Jánoš, 2015). According to INEKO: i) the PPP choice was allegedly driven more by fiscal considerations than by a solid VfM analysis; ii) the author of the feasibility study was also contracted to deliver PPP consultancy services, creating thus a potential conflict of interest, and iii) JASPERS (Joint Assistance to Support Projects in European Regions), the EU technical assistance required for major projects, was not delivered. The INEKO study was later quoted by the CEE Bankwatch Network (Bankwatch Network,2016). It has to be noted, however, that the INEKO paper preceded the second updated VfM analysis commissioned by the Ministry of Finance that resulted in the re-evaluation of the project and subsequent changes to the concession agreement (MoF, 2016). The EIB acknowledged receipt of the complaints about the project from the NGOs. The EIB Complaints Mechanism met with the Ministry of Transport, Construction and Regional Development of the Slovak Republic (MTCRD) and subsequently responded to those complaints (EIB, 2017b). The MTCRD rejected the findings and analyses of both the CEE Bankwatch Network and the INEKO papers. The MCTRD also pointed out that it is common procedure to procure the feasibility study and subsequent transaction advisory services in one package and that other complementary measures were being taken by the municipality of Bratislava to address traffic congestion in the city (MTCRD, 2017).

[75] Project financing structure at financing close, Lazarovitch R. (2017), D4/R7 - A Rebound for Slovak PPPs.

Implementation, performance and achievements

The implementation phase of the project began in the summer of 2017. The preliminary and construction works (topographic studies, tree removal, archaeological and geological surveys) on the R7 expressway commenced in early 2017, and all the documents and permits had been in place. As the project has not been fully implemented yet, it is too early to provide meaningful insights into the PPP contract management by the public authority or determine what positive or negative outcomes will be achieved in terms of quality of the infrastructure and services delivered to the public. It is too early to determine the sustainability of this investment in terms of any potential further need of public financing, but it can be said that the PPP has supported the achievement of the OP objectives.

The major advantage for the public actor was that it did not have to pay upfront for construction, but will correspond a fixed price, as agreed in the PPP contract, and no additional funds for road maintenance will be required (Brázda, 2017). Given that Slovakia is currently considering several smaller PPP projects, mainly involving intermodal freight terminals and a prison facility, the D4R7 PPP project has a strong signalling effect.

Being able to blend ESIF and EFSI funds was also a definitely positive factor. The EU Cohesion Policy regulations facilitated the development of the PPP to the extent of providing an enabling legal framework within which the ESIF resources could be contributed as subordinated debt through a FI and blended with EFSI support for the senior debt. According to a view expressed for this case study by the Slovak authorities (MoF & MoT, 2017), PPPs and projects in which FIs improve financing structures are viewed as complementary to projects funded by the EU Cohesion Policy via traditional grant instruments. Other forms of blending were not considered attractive by the promoters, due to the complexity of the approval processes. It is also important to note that a senior loan provided by the EIB to this PPP project would have been difficult to justify without the implication of EU cohesion objectives (EIB, 2017a).

The D4R7 PPP project substantially benefited from EIB informal technical and advisory assistance, which was given to the Slovak authorities before and during the public procurement phase. It included an ex-ante analysis, which covered designing and implementing ESIF financial instruments via SIH in Slovakia, provision of public sector PPP expertise and capacity building. The EC was assisted by JASPERS and the EIB in the project review process, and the EIB assisted the Slovak government in its dialogue on debt treatment for this PPP project. EIB's involvement in the project appraisal phase helped reduce the final project costs compared to the initial estimates.

A3.8 Treviso Hospital

The project factsheet

Country (region)	Italy (Veneto)
Sector	Healthcare
Programming period of reference	2014-2020
PPP actors	Public authority: Azienda Unità Locale Socio Sanitaria n. 2 Marca Trevigiana Private concessionarie: Ospedal Grando S.p.A.
Objective of the PPP within the framework of cohesion financing	This type of investment is not eligible for financing under Veneto Region OP
Investment value and Cohesion financing support	Total cost: EUR 250 million
Financial structure	Veneto Region (grant): EUR 124 million EIB (2 loans, one EFSI backed): 68 million (39m lent to Veneto Region to provide the 124m grant) Commercial lenders: EUR 51 million Ospedal Grando (equity): EUR 46 million
Contract agreement between parties	DBFO, concession duration of 21, availability payments to the private partner
Blending model	Credit enhancement via EFSI support (no ESIF involvement)
Rationale for selection of the case study	Illustration of potential future opportunities of combining ESIF with EFSI in social sector investing.

Introduction and strategic framework

The Treviso Hospital, Ca' Foncello, is one of the main hospital in Veneto Region. In accordance with the national and regional health plan to increase concentration and specialization of health services in regional hubs, the hospital had to be renewed, expanded and upgraded to serve 1 million population in the province of Treviso, and provide emergency and intensive care services. To do so, a large portion of the hospital has to be rebuilt, while core and intensive health care services, including day surgery, had to be upgraded. The new and refurbished buildings have to comply with the latest safety and anti-seismic structural regulations, as well as higher energy standards.

The new hospital construction has been organized through a PPP model. The Veneto region is not new to PPP in healthcare. The renewal of four main hospitals in the region has been conducted through PPP for a total value of EUR 4.2 billion approx. The track record of the previous PPPs is mixed and has somehow damaged the reputation of PPPs within the public opinion. Some of these PPPs have been object of investigation by Italian justice.

In Italy, local public authorities increasingly use PPP contractual arrangements to finance investment for the renewal of healthcare infrastructures. These projects are necessary for the public sector to fulfil its duties as health provider, and overcome constraints on public expenditures due to fiscal constraints which are particularly strict in Italy. Within this context, project finance has become attractive to bridge the investment gap.

Design and implementation arrangements

The decision to launch the PPP through a project finance was reached by the public authority after an ex ante assessment against other options for financing the project: loan and leasing. The cost of a loan would be lower than the project finance option, but it was excluded as the local authority would have borne the financial, construction and availability risks. The leasing was excluded because it would require the transfer of the assets twice, at the beginning and end of the contract. The project finance approach was selected because it allows the transfer of financing, construction and availability risks to the private sector, the public administration was already familiar with the PPP implementation modality, and it allows to leverage the technical and managerial expertise of the private sector. The local authority provides a grant to the concessionaire which raises the rest of the capital from the market for the construction. The concessionaire receives availability payments (*canone di disponibilità*) and payments for the provision of non-core services (i.e. non-health services). The main bulk of the services is provided to the public sector. All together these income streams repay the concessionaire and investors.

The public tender process for the Cittadella della Salute started in 2011. It was competitive and open to all providers. The concession contract demanded an extensive renewal and the partial refurbishment of the hospital, as well as the provision of asset management and facility management services for 21 years from the signature of the concession. The concession bundled together also non-core functions divided into soft facility management (hospitality, cleaning, laundry, and catering) and hard facility management (waste, energy, parking, building management, medical equipment supplies and upgrade).

In 2012 the contract was awarded to Ospedal Grando S.p.A (OG), a SPV established by the Italian branch of Lendlease, an Australian multinational corporation specialised in urban regeneration and infrastructural projects, together with other financial and industrial partners. OG is a company 80% owned by Finanza e Progetti, of which Lendlease holds a 50% share. The other 50% belongs to Servizi Italia, an industrial partner, which provides laundry and sterilization services for hospitals. In Italy, it is mandatory for the economic operator in charge of PPP contracts to include industrial partners which deliver works and services as SPV shareholders. The PPP for Treviso hospital is a very rare case in which the leader and majority shareholder is a pure developer and investor, rather than a construction company.

It took three more years to finalize the bureaucratic itinerary due to public authorizations, further administrative checks and a law suit led by defeated competitors. The concession contract was eventually signed in December 2015, the financial closing between all private investors took place in July 2017 and actual construction started in August 2017.

The total value of this project is EUR 250 million: 124 million from the public sector and 126 million from the private sector (Table 12). For a project to be considered a PPP, Eurostat accounting rules require that more than 50% of the capital investment is borne by the private sector. The private sector's share is divided into: EUR 20 million equity capital provided by the shareholders of the OG, EUR 26 million in income generated by the provision of services to the public sector and commercially and, finally, EUR 80 million raised from financial institutions (EIB, UniCredit Group, Intesa Sanpaolo Bank Group). The PPP received support from the EIB through two different loans: EUR 29 million to Ospedal Grando S.p.A., to support the design, construction and operation of the new *Cittadella della Salute*, and EUR 39 million to Veneto Region - providing capital for public sector's share of the project. The EIB loan to OG includes a EFSI guarantee to reduce the construction risk.

Table 20: Treviso Hospital – financing structure

SOURCE OF FUNDING	TYPE OF FUNDING	AMOUNT (EUR)	SHARE OF TOTAL COST
Veneto region	Grant	124 million	50%
Commercial lenders	Loan	51 million	20%
OG	Equity	46 million	18%
EIB	Loan	29 million (Note: 39m also lent to the Veneto Region to part-finance the provision of the 124m grant)	11%

The EIB lends at the lowest rate in the market, reducing significantly the cost of lending compared to commercial bank sources. Ospedal Grando saves 90 basis points (- 0.9%) on the cost of debt servicing as compared to the market price made by the leading commercial bank involved in the PPP. Moreover, further savings were made on the upfront and commitment fees[76]. Thanks to the EIB loans, Ospedal Grando saved EUR 1.8 million that were earmarked for the capitalization of a newly established impact investing[77] vehicle whose main purpose is to invest in entrepreneurial initiatives related to public health in Treviso and the Veneto Region, such as new e-health services. This is corporate venture capital operation aiming at increasing the overall value of the project. The choice to establish an impact investing vehicle, rather than distributing the extra dividends to shareholders, was an initiative of Lendlease. This is an opportunity for the company to test a new model for social infrastructure projects and increase their attractiveness in a highly competitive market. The establishment of the vehicle was formalised in the financing contract between OG and the banks and its performance is to be audited by an independent social impact certifier every year from the start of construction phase.

Implementation, performance and achievements

Overall the assessment of PPP by both the public and private sector partners has been positive, although the concession contract has room for improvement. For instance, it could have allowed greater flexibility in allocating functions to the private or public sector partners for the purchase of medical equipment, as in the current contract, this function is assigned to the private partner but the public sector could make the purchases at lower prices.

The project has brought about two substantial positive innovations. Firstly, the consortium of private partners was led by a financial operator and experienced developer and asset manager, but not a constructor. This was a novelty in the Italian context where PPP in the healthcare sector are usually led by construction companies, which do not have strong financial competencies. Secondly, the creation of the social impact investing vehicle was another important novelty. This operation can be compared to local impact investing vehicles

[76] The financial costs of the debt are: upfront fee, commitment fee and interest fee. The upfront fee charged by EIB is sensibly lower than the one of commercial banks but the benefits were absorbed by extra transaction costs for the negotiation with EIB.

[77] Impact investing stands for investments which seek both social and financial returns (Italian National Advisory Board, 2014)

established with Cohesion Policy support that have brought together public and private investors to co-invest for social innovation and entrepreneurship, such as in the case of the Liverpool City Region Impact Fund[78] and Portugal Social Innovation Programme. The substantial difference compared to the fund established within the context of the PPP for Treviso Hospital is that this was set up by the private sector and designed as a corporate venture capital operation and did not have to cope with all the administrative procedures attached to ERDF/CF financing, which often discourage private investors.

It is not clear at this stage to what extent this model can be replicated, and in particular the possibility that the highly competitive EIB loan conditions can facilitate the private sector's commitment to reinvest the savings in the community. The latter would be in line with the original vision of the Juncker Plan and could be a good match with the goals of Cohesion Policy (Lippari, 2012). The answer to this question may also be relevant for the future development of EFSI assisted EIB investment in the social sector which has, so far, delivered two investments, one the Ospedal Grando and the other the social impact bond for the integration of immigrants in Finland[79].

Based on the priorities of the regional OP, the Regional authority could have used ERDF resources for specific functions of the project, such as energy efficiency and renewal of medical equipment, but this possibility did not materialize. A first obstacle relates to the complexity of PPP and Cohesion Policy procedures and the lack of sufficient in-house capabilities to manage effectively the two processes. The possibility of mobilising ERDF resources was also excluded due to the bureaucratic requirements and lengthy procedures required. The construction of the new hospital had been already delayed for several years. Therefore, when the new administration of the provincial health agency took over in 2015, the blending was considered too risky by the public stakeholders. However, local authorities are considering the potential of the blending model for future projects, such as the renewal of the hospital in Padova.

[78] See http://www.sibgroup.org.uk/liverpool-city-region-impact-fund and http://inovacaosocial.portugal2020.pt/

[79] See https://ec.europa.eu/commission/commissioners/2014-2019/katainen/announcements/investment-plan-europe-first-social-impact-bond-scheme-europe-supports-integration-finland_en

ANNEX 4: GLOSSARY OF PPP TERMS

TERM	EXPLANATION
Availability payment PPP	A payment for performance made irrespective of actual demand. Availably payment-based PPP are used when projects do not generate a direct revenue, performance is easily to monitor, demand is difficult to predict and service quality is more important than revenue maximization.
Blending	Mechanisms through which EU funds, including ESIF, are combined with private financing in a PPP contract. Projects are thus defined as blended PPP projects
Concession PPP	Concession PPPs are traditional PPP methods applied when users pay for the use of an asset. User charges reimburse the concessionaire for the cost of building and operating the facility which can revert back to the public sector at the end of the concession period.
DBFO (project finance)	The private sector provides assets, arranges debt financing from commercial banks for a high share of the cost of the asset and equity for the balance of the funding requirement and on-going operation and maintenance services in respect of the assets but the public sector pays for the asset on completion and for the services when provided. The private sector gets paid on completion by the banks while the public sector pays a capital charge over the contract life which is used to repay the banks and to remunerate the equity.
DBO	A single contract is awarded for the design, construction, and operation of an infrastructure. Financing of the infrastructure is organized by the public partner. Title to the facility remains with the public sector unless the project is a design, build, operate and transfer. .
Financial Instruments	Repayable and revolving forms of intervention where the funding agreement is based on the provision of financial products, such as loans, equity and guarantees.
Financial leverage of public funds	The ability of a public financial commitment to mobilise some larger multiple of private capital for investment in a specific project or undertaking.
Financing gap	Difference between demand and supply of capital or credit that is needed to build an infrastructure.
Grant	A non-repayable contribution to a final beneficiary
Hybrid projects	The term, which is mostly used in Poland, refers to projects that combines private financing with EU fund support.
Off-balance sheet accounting treatment	When an asset or debt that does not appear on a company's, or public administration, balance sheet, but these are nonetheless assets or liabilities.
Public sector comparator	A tool used by governments to figure out if a PPP would be the most cost-effective arrangement for the delivery of public sector projects
Senior debt	The top-tier funding provided by lenders or capital market investors. It typically forms the largest, but not the sole source of funding, for the special purpose vehicle company
Soft loan	Loans with lower interest rates, longer repayment periods or have lower collateral requirements.
Special Purpose Vehicle	A limited liability company, is created to undertake the contracted services, to own the assets and to be the contracting party with the public sector.

TERM	EXPLANATION
Value for Money	The optimum combination of a project whole life cost (i.e. construction, maintenance, operation and dismissal). Since the concept of "whole life cost" includes both quantifiable and non-quantifiable or intangible costs and benefits, through VfM calculation, the contracting authorities can include social, economic and environmental policy objectives within the procurement process.
Whole-life cost	The whole life cost is a key concept in the DBO and DBFO models. It is defined as the costs of acquiring, operating and maintaining an asset over its whole life through to disposal.

CAT: QA-04-17-880-EN-C (paper)
CAT: QA-04-17-880-EN-N (pdf)

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PHOTO CREDIT: iStock International Inc., Photodisk, Phovoir

ISBN 978-92-846-2002-9 (paper)
ISBN 978-92-846-2001-2 (pdf)

doi:10.2861/342557 (paper)
doi:10.2861/809503 (pdf)

Publications Office