

Partnership as flywheel, for improved performance

A comparative study on PPPs in office building projects in the
 Netherlands.

“What are drivers for improved performance of Public Private Partnerships in office building projects compared to projects in transport infrastructure in the Netherlands?”

Colophon

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Table of contents

Colophon.....	2
Abstract.....	4
1 Introduction.....	5
1.1 Background.....	5
1.2 Societal and scientific relevance.....	5
1.3 Research questions.....	5
1.4 Reading guide.....	6
2 Theoretical framework.....	7
2.1 Defining Public Private Partnerships.....	7
2.2 Defining improved performance.....	8
2.3 Conceptual model.....	11
3 Methodology.....	11
3.1 Case study.....	11
3.2 Data collection.....	12
3.3 Data analyses.....	12
3.4 Ethical considerations.....	13
4 Results.....	13
4.1 Interview results.....	13
4.2 Discussion.....	15
5 Conclusion.....	16
6 Limitations.....	16
7 References.....	17
8 Appendix.....	19

Abstract

There is much debate on performance of Public Private Partnerships (PPPs), across several sectors, identifying drivers for success could help addressing this research gap. One of these sectors is office building PPPs, which shares contract forms with transport infrastructure PPPs. The research question that is adopted in this study is: “*What are drivers for improved performance of Public Private Partnerships in office building projects compared to projects in transport infrastructure in the Netherlands?*” This study assesses the theory on performance drivers for transport infrastructure in the Netherlands, and through a case study tries to find performance drivers in office building PPPs. Two perspectives on performance drivers are found, relating to contract and collaboration. This shows large similarities with the theory on performance drivers for transport infrastructure PPPs. Future research could be focused on a broader context, assessing different performance measures, comparing other sectors, or even consider difference between countries.

Keywords: PPP performance, office building infrastructure, drivers for performance.

1 | Introduction

1.1 Background

Over the last few decades, public-private partnerships (PPPs) have spread across the Western world (Hurk et al., 2016). PPPs are used in the realisation of different kinds of public products and or services (Van Ham and Koppenjan, 2001). In this research the focus lies on PPPs in infrastructure projects. Over the years, countries have acted differently upon this new governance model for public infrastructure project and service delivery (Petersen, 2011). Countries like the UK, Ireland and Portugal have developed strong policies and have allocated large numbers of projects, while others like Belgium, Austria and Denmark showed much more scepticism towards PPP contracts (Petersen, 2011). The Netherlands was in the middle, with existing policies but smaller numbers of projects in these years (Petersen, 2011). In more recent years, PPPs have been popular and are used extensively (Hodge and Greve, 2017; Verweij and Van Meerkerk, 2021). Advocates argue that PPPs bring advantages to the delivery of public projects compared to other public procurements. This can for example refer to expected improvements on quality, costs, and delivery times (Kwak, Chih and Ibbs, 2009). However, like the difference in adoption across the European continent, literature shows debate on the performance of PPPs.

1.2 Societal and scientific relevance

Optimizing the advantages of PPPs is of importance as this will lead to a more effective, efficient and better implementation of public infrastructure (Grimsey & Lewis, 2005). Another aspect that is of importance is that PPP structures offer the opportunity to develop projects that are beyond the reach of governments by bundling forces with private partners (Hodge and Greve, 2017).

Even though each PPP project is unique and greatly influenced by local context, Palcic, Reeves and Siemiatycki (2019) note that there are experiences that are comparable across projects, which can result in lessons. This is of importance as there is a gap in the knowledge about PPP performance (Palcic, Reeves and Siemiatycki, 2019). Petersen (2019) makes a similar claim, stating that evaluations of PPP performance are much needed. Studying PPPs in a comparative way comes from an interest in the similarities and differences and is fundamental in the question why governments use this form in the first place (Petersen, 2011).

One of the much-debated questions, that influences the performance, is what makes these partnerships work. Hodge and Greve (2017) highlight that there is a need to understand potential causal factors behind the idea that PPPs are capable of better performance. This comes from mixed views on whether the expected benefits prove to be true (Warsen et al., 2018). The theory shows contradicting results, with different factors influencing the performance. The article by Klijn and Koppenjan (2016) considers drivers for performance based on contractual forms, and the mechanisms within, of minor importance, while later research stresses the importance of these drivers next to drivers on the relationships between the partners (Koppenjan et al., 2022). This research will contribute to solving the research puzzle that exists in the literature on drivers behind performance.

1.3 Research questions

In this research the focus lies on the development of office buildings in the Netherlands through PPPs. “*Het Rijksvastgoedbedrijf*” is the real-estate company of the Dutch government and uses PPPs for the construction of their facilities. Two office buildings created by Het Rijksvastgoedbedrijf, with a PPP contract, “*Kempkensberg*” and “*De Knoop*”, are used as a case study to identify factors for success, and these are compared to existing literature that is based on transport infrastructure PPPs. This to identify similarities and differences, which can contribute to narrowing the research gap that exists on PPP performance and the drivers behind.

First of all, it is important to set a clear definition for PPPs and illustrate the process and important factors. The comparison is based on literature from transport infrastructure projects. Therefore, the main research question in this research is:

What are drivers for improved performance of Public Private Partnerships in office building projects compared to projects in transport infrastructure in the Netherlands?

To answer this question the following sub-questions have to be addressed:

1. How is performance defined for Public Private Partnerships in transport infrastructure?
2. What are drivers for improved performance of Public Private Partnerships in transport infrastructure?
3. What are drivers for improved performance of a Public Private Partnership in office buildings?
4. How do drivers for improved performance compare between the case studies and transport infrastructure?

1.4 Reading guide

This thesis consists of six chapters. Based on existing literature, core concepts will be defined in chapter two. Chapter three shows the research methods that are used and gives a background on the case studies. The fourth chapter presents results and will discuss the findings compared to existing literature, followed by the fifth chapter answering the main research questions. The final chapter will reflect on the research process.

2 | Theoretical framework

2.1 Defining Public Private Partnerships

2.1.1 General

There is an extensive amount of research carried out on PPPs, but there is no general definition for the concept (Hodge and Greve, 2017), which shows the complexity that is involved. This finds its origin in the many forms a PPP can take on, as suggested by for instance Warsen et al. (2018). The forms can range from short-term collaborations, to extensive, long-term partnerships with strict contracts. The various sectors PPPs can be used in plays a role in the complexity as well, as illustrated by Little (2011). The extent of the collaboration and the division of work between the public and private actors can vary as well. In this part of the theoretical framework, different definitions are identified to set the basis for the research.

2.1.2 Definition of PPP

Setting the definition for PPPs is dependent on several factors, as well as the approach that is taken. A broad definition sees every collaboration between the public and private actors as a PPP, following for instance Vives, Benavides, and Paris (2010). A narrower definition considers more factors: “we define public–private partnerships as co-operation of some durability between public and private actors in which they jointly develop products and services and share risks, costs and resources which are connected with these products or services” (Van Ham and Koppenjan, 2001, p. 598). Aspects like a durable cooperation, shared risks, and joint production of services or products are returning in most definitions according to Warsen et al. (2018). The definition by Little: “PPPs are contractual agreements between the public and private sectors wherein the private sector, in exchange for compensation, agrees to deliver facilities and/or services that have been or could be provided by the public sector.” (Little, 2011, p. 243) is adopted in this research.

Definitions can be narrowed down further, for instance based on the utilisation of PPPs. PPPs are used in various public products, but infrastructure development is arguably the most common type in Europe (Hurk et al., 2016). As this study focuses on PPPs in infrastructure development, narrower definitions can provide more context. According to Hodge and Greve (2017) the long-term infrastructure contract (LTIC) is prominent in this sector. This is a PPP contract form which often contains a design, finance, build, operate, transfer model, with private financing, and is long-term oriented.

2.1.3 Different forms of PPP

To realise projects with different goals and demands in infrastructure projects, various forms of PPP contracts are used. Little (2011) identifies many forms of PPP contracts in public infrastructure, however this list does not contain all forms, as it gives an overview of the different tasks the private actor can adopt, without combining all possible variations. Combining forms results in a list with contracts that are popular in infrastructure projects in the Netherlands (table 1).

Design-Build (DB) / Design & Construct (D&C) ¹	The private sector designs and builds infrastructure to meet public sector performance specifications, often for a fixed price, so there is a transfer of risk on financial aspects.
Design, Build, Finance, Maintain (DBFM)	The private sector designs and builds infrastructure to meet specifications set by the public sector, while (partly) financing and maintaining over a period of time
Design, Build, Finance, Maintain and Operate (DBFMO)	The private sector designs, builds, (partly) finances, maintains and operates a facility.

Table 1: Overview of a selection of PPP forms in infrastructure planning. Combining findings from Little (2011), adapted by Author (2022).

1: Dependent on definitions, D&C can be considered as regularly procured projects. Verweij and Van Meerkerk (2021) consider D&C not as PPP because private financing is not present. Little (2011) however, lists D&C as a PPP.

The most discussed PPP form in infrastructure projects is the Design, Build, Finance and Maintain (DBFM) contract (Koppenjan, et al. 2022). This form is, next to the D&C contract, most used in the development of infrastructure (Little, 2011). As said earlier, the kind of infrastructure that is developed is of essence for the contract form. In the Netherlands, in transport infrastructure development, the D&C and DBFM contract forms are dominant. For the development of office building infrastructure, the D&C and DBFMO contract forms are dominant. The operational aspect of the DBFMO introduces another dimension to the partnership, as the private actor also takes care of the operation of the facility after it has been realised (Warsen et al., 2018). Operate is specific for facilities and creates an important difference with forms of contracts that are used in transport infrastructure, as it requires different qualities from the private partner.

2.1.4 Rational behind the use of PPPs

There are different rationales behind the use of PPPs, ranging from better cost performance, improved time performance and a higher quality of products and services, compared to traditional procurement (EPEC, 2015), this whilst (or due to) sharing resources, responsibilities and rewards (Kwak, Chih and Ibbs, 2009). Other reasons to use PPPs include the possible development of new products, innovation, and a long-time partnership with a stable basis (Hodge and Greve, 2017). The ability to divide risks to the actor who is best capable of managing it can be considered as another important aspect to opt for a PPP (Little, 2011). Another common argument for PPPs, and specifically for forms with an operate contract, is the expected reduction of life-time costs (Petersen, 2019).

2.2 Defining improved performance

2.2.1 General

In recent years a lot of research has been conducted on the performance of PPPs (e.g. Verweij, 2015b; Petersen, 2019; Verweij and Van Meerkerk, 2021). The multi-dimensional nature and its many different forms means that PPPs can be evaluated from different angles (Greve and Hodge, 2013).

When assessing the performance of large projects, the “Iron Triangle” is often employed (Dimitriou, Ward and Wright, 2013). This term is used for performance assessment based *on time, cost and project specification adherence* (quality), used in large (infrastructure) projects (Dimitriou, Ward and Wright, 2013). Following the rationale behind the use of PPPs there are large similarities with the indicators that are used in the Iron Triangle, therefore it makes sense to include these in the definition for improved performance. Verweij and Van Meerkerk (2021) note that an evaluation solely on costs and time can be considered narrow, and that achieving innovation, by making use of the capacities of the private sector, is of value as well.

Combining these findings and following research by Koppenjan et al. (2022), who researched Dutch waterway and road infrastructure projects (transport infrastructure) performances, the following four aspects are used: *cost performance, time performance, quality and innovation*. In their research Koppenjan et al. (2022) define and set multiple indicators for the improved performance of the aspects, in this research these are simplified (table 2).

Cost performance	Realising the project on-budget and the presence of additional working costs.
Time performance	Realising the pre-arranged deadlines
Quality	The outcomes of the project are meeting the standards described in the contract.
Innovation	Innovation was present in products or in process

Table 2: Overview of the four aspects assessing improved performance in infrastructure projects. Based on research by Koppenjan et al. (2022), adapted by Author (2022).

As the aspects on which improved performance is assessed for a DBFM project are set, possible drivers can be identified.

2.2.2 Drivers for improved performance

Every PPP project is unique and formed through local context, however, across multiple projects similarities can be found, which can provide broader lessons as Palcic, Reeves and Siemiatycki (2019) have noted. Little (2011, p. 241) makes a similar statement, “Successful projects, like happy families, all seem to share similar traits.” Koppenjan et al. (2022) recapitulates several articles creating two perspectives on explaining PPP performance, which results in a background for factors influencing performance. The first is that of the contractual perspective, here the partnership is seen as a principal-agent relationship, with a public actor as the principal and the private actor as the agent (Verweij and Van Meerkerk, 2021). In this partnership the principal is dependent on the agent to receive the information to assess the performance of the agent. Such relationships are characterised by an information asymmetry and different goals, which can lead to the agent serving their self-interest (Verweij and Van Meerkerk, 2021). The contract plays a key role to secure performance, as it can dictate specifications, and with that, ensure performance (Koppenjan et al., 2022). However, Koppenjan et al. (2022, p. 4) also note that there is a need to strengthen the contract by introducing additional mechanisms, due to the contract being incomplete, because of “limitations and transaction costs of collecting information.” This results in the public actor’s need to invest in a good contract, but also in mechanisms that influence the performance.

The second perspective that Koppenjan et al. (2022) identifies to explain PPP performance, focusses on relational factors in the management of PPP contracts. In this perspective the development of trust and commitment between partners is seen as the way to deal with incompleteness of the contracts (Koppenjan et al., 2022). Trust and commitment are processes of intensive interaction and can be realised by motivating actors and sharing risks and responsibilities as summarised by Koppenjan et al. (2022).

These two perspectives result in a list of five drivers for an expected higher performance of PPPs, that are dominant in literature. Four are based on the contractual perspective: private financing, performance-dependent payments, bundling (known as integrated contracts) and risk transfers (Koppenjan et al., 2022). The fifth driver is based on the relational perspective, and considers collaboration (Koppenjan et al., 2022).

Private financing is present in a large amount of different PPP contract forms. Verweij and Van Meerkerk (2021) note that for a true PPP form, private financing should be present. In DBFM and DBFMO contracts the private consortium finances (partly) upfront and needs to earn their investment back over time. This is expected to improve risk management by the private sector which will result in better cost and time performance (Verweij and Van Meerkerk, 2021). With the private sector responsible for the financing, risks are limited, which is expected to have a negative result on innovation (Hueskes, 2019).

Performance-dependent payments is a mechanism that is used in different phases in PPPs. The private sector is paid based on their performance, for instance based on delivery on time and/or related to certain quality standards. When a deadline or quality standard is not met, payment is lower or delayed,

which will have a negative effect on the profit for the private partner (Koppenjan et al., 2022). This mechanism is used in the building, maintenance and operate phases of the PPPs, and has an expected positive influence on quality and time performance, as the private sector has an incentive to deliver as agreed.

In DBFM and DBFMO contracts different project phases are integrated into one contract, where traditionally these would have been contracted separately. This creates the ability to think about lifecycle optimization, improvements that have an influence on a longer time span. Bundling is expected to improve quality, as the private sector is responsible for the maintenance, and has therefore an incentive to invest in quality during the design and build phases (Koppenjan et al., 2022). Next to that there is an expected improvement on cost and time performance as different phases can be planned and executed more efficiently (Lenferink, 2013). Innovation is expected to be stimulated by the bundling of different phases, as clever ideas are needed to achieve lifecycle optimization. In the maintenance and operate phases of the contract innovation is also expected, as the contract describes what is required, and not how this should be done precisely, leaving room for new ideas (Koppenjan et al., 2022).

Risk transfer is at the basis of PPPs, as the various stages of the project, and the related risks, are transferred to the private partner. This also means that the managing of the connection between the different project phases is transferred (Verweij, 2015a). Expected is a positive influence on cost and time performance, and quality, as it is assumed that the private sector is better at project management (Koppenjan et al., 2022).

Collaboration is expected to have a positive influence on cost and time performance, and quality, as trust develops between public and private partners. This will result in improved sharing of risks and resources, and the partners being more receptive to the problems of the other and seeking for solutions together, as Koppenjan et al. (2022) summarises. Innovation can also be positively stimulated by collaboration, as trust and commitment increase the inclination to take risks (Warsen et al., 2018). Because of the long-term nature of the DBFM and DBFMO contract, a good collaboration is a more logical driver than in short term contracts, but also of more importance.

Table 3 shows an overview of the expected relations between the performance drivers, and cost and time performance, quality, and innovation.

	Cost performance	Time performance	Quality	Innovation
Private financing	+ Verweij and Van Meerkerk (2021)	+ Verweij and Van Meerkerk (2021)	?	- Hueskes (2019)
Performance dependent payment	?	+ Koppenjan et al. (2022)	+ Koppenjan et al. (2022)	?
Bundling	+ Lenferink (2013)	+ Lenferink (2013)	+ Koppenjan et al. (2022)	+ Koppenjan et al. (2022)
Risk transfer	+ Verweij (2015a)	+ Verweij (2015a)	+ Koppenjan et al. (2022)	?
Collaboration	+ Koppenjan et al. (2022)	+ Koppenjan et al. (2022)	+ Koppenjan et al. (2022)	+ Warsen et al. (2018)

Table 3: Overview of the relationship between performance drivers and aspects of improved performance (Author, 2022). + expected positive influence. - expected negative influence. ? Unknown influence.

2.3 Conceptual model

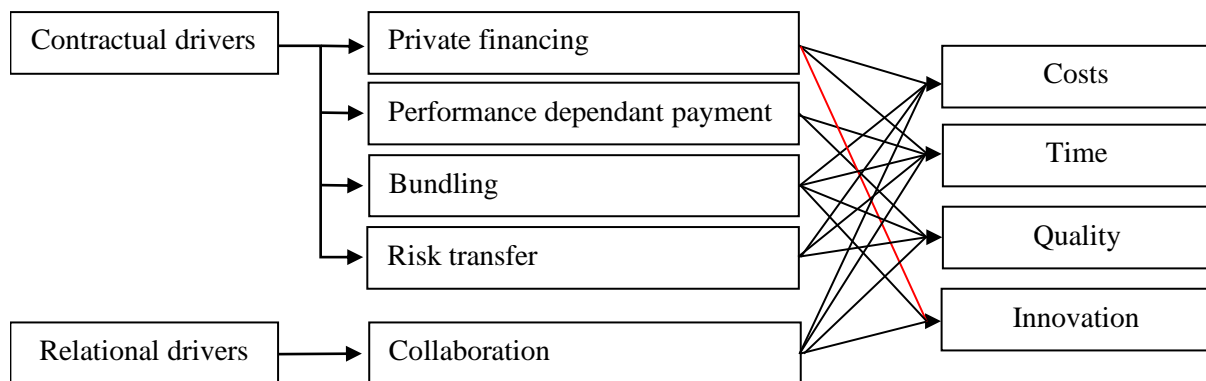


Figure 1: Conceptual model, based on Koppenjan et al. (2022, p.8); edited by Author (2022).

The conceptual model (figure 1) shows how the different performance drivers relate to the aspects that are used in this research to assess success. The two perspectives, contractual drivers, and relational drivers (Koppenjan et al., 2022), form the basis for the performance drivers. The effects of these performance drivers on the aspects for success are illustrated by the arrows.

3 | Methodology

3.1 Case study

3.1.1 Choice for a case study

As stated earlier, a PPP project is unique and influenced by many local factors, however there are similarities in experiences across different projects, which can result in lessons (Palcic, Reeves and Siemiatycki, 2019). Identifying the similarities and differences can contribute to the literature on the rationale behind the choice for PPPs (Petersen, 2011). To identify similarities and differences this study adopts a study into two cases and compares the outcomes with existing literature.

3.1.2 Case description “Kempkensberg”

The first case that is analysed is an office building in Groningen, which is named “Kempkensberg”. This was one of the first PPPs in office buildings in the Netherlands that delivered a new building. In this collaboration the governmental body was “Rijksgebouwendienst”, which can be seen as the predecessor of the current “Rijksvastgoedbedrijf”. The tender was won in 2008 by a consortium by the name DUO², and the building was finished in 2011. In this 92-meter-high office building, two governmental institutions, “Dienst Uitvoering Onderwijs” (DUO), and “de Belastingdienst” are housed. The PPP contract has the form of a DBFMO and is currently in the operation phase.

3.1.3 Case description “De Knoop”

The second case that is analysed is “De Knoop” in Utrecht. This is a more recent PPP, where the tender was won in 2015, by the consortium “R Creators”, the building was opened in 2018. In this project an existing building was transformed into an office building which houses different governmental institutions. The responsible public partner in this project is “Rijksvastgoedbedrijf”, with a DBFMO contract form which is in the operation phase.

3.1.4 Case selection

The case selection was based on several grounds, starting with a location in the Netherlands, and with a true PPP contract form. The contract form that the Dutch government often uses is the DBFM(O) contract, both cases meet these requirements. As the PPP “Kempkensberg” was the one of the first

office building project in the Netherlands to take on this contract form, it forms a good starting case. As it is an older contract, the performance in the later stages of the contract can be assessed as well. “*De Knoop*” was selected because this project is special for its contractual elements. The tender phase considered hospitality and a durable partnership, this was not done before and therefore it is an exceptional case which can potentially show relevant results.

3.2 Data collection

3.2.1 Literature review

To start, a literature review was conducted to set definitions and form the basis for a comparison. The literature provided the data that was required to answer sub-questions 1 and 2 and form the basis for the design of the interviews and the coding tree (appendix 1). It also creates the ability to compare the case studies with existing literature, which answers sub-question 4. Literature was found using search engines ‘Smartcat’ and ‘Google Scholar’.

3.2.2 Semi-structured interviews

By conducting semi-structured interviews with experts on PPPs in office building development in the Netherlands, primary data is gathered, to answer sub-question 3. As the drivers behind improved performance are a complex topic, which can also be subject to perception, it is important to give room for explanations. Semi-structured interviews give room to ask open questions, and allow for clarification of subjects. The interviews were conducted in Dutch to ensure respondents to feel at ease.

Three interviews are conducted as shown in the table. The respondents were contacted via e-mail and selected based on their experience with PPPs in office buildings in the Netherlands. The respondents vary in their role in the PPPs but have been working (or still are) on both “*Kempkensberg*” and “*De Knoop*”.

Interview nr.	Anonymised name	Employer	Function	Date	Duration
1	Respondent 1 (R-1)	“Rijksvastgoedbedrijf”	Project manager of PPP projects	4-5-2022	47:35
	Respondent 2 (R-2)	“Rijksvastgoedbedrijf”	Project leader of PPP projects		
2	Respondent 3 (R-3)	“Belastingdienst”	working with PPP as end-user	24-5-2022	1:29:42
3	Respondent 4 (R-4)	“Rijksvastgoedbedrijf”	Project leader of PPP projects	13-6-2022	33:56

Table 4: Overview of participants in semi-structured interviews, Author (2022).

3.2.3 Documents

To collect more data than solely the interviews, two additional documents are assessed. The documents are an evaluation report on “*the Knoop*” (2019) (D-1), and a weblog by “*Rijksoverheid*” (2019) (D-2). In the evaluation report an extensive reflection on the process of the realisation of “*the Knoop*” is presented, with a focus on the collaboration between the public and private sector. This reflection is done with a large group of public and private actors, all that were involved in the project. The weblog, which is an interview with three relevant actors in the project, shows a reflection on the first stages of the operate period in “*de Kempkensberg*”, and how improvements were made. These two documents help filling gaps in the data from the interviews.

3.3 Data analyses

The interviews are voice recorded and converted into transcripts. After this the text is analysed by using the coding software ‘ATLAS.ti’. Codes are based on the discussed theory, identifying the

drivers behind improved performance, as can be seen in the coding tree (appendix 1). The interviews also provided a lot of general information on PPPs, the functioning of the contract, and the measures of improved performance. After applying the codes, patterns and relations are tried to be identified, which will lead to the results.

3.4 Ethical considerations

Ethical considerations will be given attention. The researcher of this study has the aim to be as objective as possible and has no personal interests. There are no personal connections to the parties involved and the researcher is an outsider to the domain. When selecting respondents, there will be no considerations that can lead to harm in terms of discrimination in any form. The privacy of respondents in the interviews are of importance, therefore the data is anonymized. Collected data will not be distributed to third parties or used without consent of the respondents.

4 | Results

4.1 Interview results

In this chapter the results of the case study are presented. As indicated before, the information is based on the semi-structured interviews and the documents. This chapter roughly follows the structure that is used in the theoretical framework, starting with the view on PPPs and the effects this has on the specific cases. Next, the performance drivers that have led to the improved performance on costs, time, quality and innovation are discussed, where a division has been made between the two cases.

Contract form

In the contract for “*Kempkensberg*” and “*De Knoop*” DBFMO contract forms have been used. In this contract form the Design, Build, Finance, Maintain and Operate are tasks the private actor fulfils. Before drivers for improved performance can be identified, it is important to assess the performance of the “*Kempkensberg*” and “*De Knoop*”. Here the aspects that are identified in the theoretical framework are reused: *cost performance*, *time performance*, *quality* and *innovation*. Both r-1 and r-3 (2022) shine light on the performance of both projects and conclude that the projects are considered successful when looking at *cost performance*, *time performance* and *quality*, from a public perspective. “*De Knoop*” has proven to be profitable in terms of *cost performance* for the private partner as well, information “*Kempkensberg*” is unknown as this information was not shared (r-1, 2022).

Bundling

The *bundling* of tasks at the private partner in the DBFMO contract brings advantages, for *quality performance* (r-2, 2022). This is illustrated by the quote: “... *when the private actor is also responsible for maintenance ... and services, as security and cleaning ... they consider this in their design*” (r-2, 2022). This leads to more efficient processes and better *performance on time and costs* (r-4, 2022). The bundling in this form becomes rarer, as large parts of the operate aspect, is returned to the public actor, this comes from political considerations (r-1; r-2, 2022).

Performance dependent payments

Performance dependent payments are identified in different stages of “*Kempkensberg*” and “*De Knoop*” (r-1; r-2; r-3, 2022). This mechanism, that is embedded in the contract, pressures the private partner to deliver in time, which improves *time performance* (r-2, 2022). R-4 describes why this *time performance* is important, “*the planning in these projects have to be met, as multiple other plannings are in tune*” (r-4, 2022). In the operate phase of the project *performance dependent payment* pressures

the private partner to make sure that quality of services and goods are met, if not, payment is cut or delayed. (r-3, 2022).

Influence of award criteria

“Kempkensberg” has taught us important lessons, that we have applied in “De Knoop”. An aspect that improved all aspects of performance was the *influence of award criteria* in the tender process. In the “Kempkensberg” project, price was weighed heavier than quality, resulting in the consortium winning the tender with a tight budget. This leads to an incentive by the private partner to simplify design to try and save on money in the exploitation phase, which results in an “*difficult process*” (r-1, 2022). In this process quality had to be guarded to a larger extent, which resulted in more *costs* (r-1, 2022).

In “De Knoop” project the award criteria are arranged differently (r-2, 2022). First the weighing between *quality* and *price* was changed, making quality the dominant factor. Adding to that, and what was completely new, half of the *award criteria* was based on the private partner’s view on *partnership* (r-1; r-2; r-4, 2022).

Partnership

One of the most important drivers behind improvements on cost performance, time performance and quality, is *partnership*. All respondents named and explained how an intensive, positive partnership contributes to improvements on performance. D-1 (2019) also highlights that the long-term relationships between parties increases the importance of a good partnership. However, the way partnerships influence the improvement of performance is a complex interaction between different aspects.

The first aspect that is of influence is the way the contract is viewed by the involved actors. R-1 explains that the way the relationship between the public and private actor is considered is of the essence. This is illustrated by the following quote: “*In a DBFMO it goes wrong when you look at the contract as a ‘we, them’ contract ... you have to adopt a ‘we’ mode*” (r-1, 2022). Looking at the contract in the ‘*we’ mode*, will result in better partnership and commitment between partners (r-1). This process starts when setting definitions. When considering the collaboration between public and private actors as a partnership, instead of just a collaboration, the process is positively influenced. R-2 underlines this, “*collaboration does not have to result in commitment, partners, however, do commit*” (r-2, 2022).

When the contract is viewed as a partnership several advantages will follow. When there is commitment between public and private actors, the way they interact with each other will change as well. *Sharing information* is one of the aspects in which this is shown. When public and private partners share information, they can, amongst other things, improve on managing expectations, which results in better performance on costs and time. “*What can we consider as finished ... exchanging views between public and private actors has brought a lot ... when agreeing, failure costs are minimal... and you can prevent repair work*” (r-1, 2022). Another aspect that is influenced by *sharing information* is the reduction of misunderstandings between partners, this results in a better performance on costs and time (r-4, 2022).

The next aspect that follows from this view on the relations within the contract, is an increase in *trust*. When trust between partners is disrupted, working together becomes increasingly difficult (r-1; r-3, 2022), resulting in negative performance on all aspects (r-1, 2022). Investing in the *partnership* by trying to understand what drives another actor, and what is important for them can improve the trust between partners (r-2, 2022).

Partnership is not something that arises out of nowhere, all respondents note that this requires work and dedication. “*Understanding each other’s interests, concerns and risks, is extremely important ...*

it has to be sincere and with the right interests” (r-2, 2022). This is, however, greatly dependent on the persons that are in charge of the project. R-3 describes the partnership as a fabric of people working together and interacting with each other. “*To realize desired outcomes people have to interact, and understand each other*” (r-3, 2022). This view on *partnership* is the main line in the document which evaluates project “*De Knoop*” (D-1, 2019). According to r-1 this can be influenced by for example the use of training on how to interact between public and private actors. “*Feedback can really improve quality ... we followed a training on how to give feedback, private and public actors together.*” (r-1, 2022). In “*De Knoop*” partnership is considered and worked out in the contract, this is an important aspect, as r-1; r-4 (2022) note. “*You have to be able to enforce agreements (on partnerships), ... that is why we specified it in the contract.*” (r-2, 2022). R-2 (2022) notes that when this process is organised, it influences the complete process in a positive way: “*when that flywheel is moving, the projects receive wings*”.

4.2 Discussion

When comparing these findings to the literature that was identified in the theoretical framework, large similarities can be identified. The perspectives for performance drivers that are identified in PPPs in transport infrastructure (Koppenjan et al. 2022), can be applied to office building PPPs as well. The contractual and relational perspectives, and their drivers, are largely consistent.

The contractual perspective in the results show three main performance drivers, *bundling*, *performance dependent payment*, and *influence of award criteria*. There are large similarities with the literature. *Bundling* is said to bring improvements on all four aspects of improvement on performance, cost and time performance, quality, and innovation, according to the literature (Koppenjan et al., 2022; Lenferink, 2013). In this research only the influence on innovation is not clear, but improvements on performance related to cost, time and quality are identified. *Performance dependent payment* is said to improve on time performance and quality (Koppenjan et al., 2022), this research finds the same results. This research finds that *influence of award criteria* is a performance driver that influences all aspects of improvement on performance. The literature on this performance driver is limited, possibly because it is a very specific part of the contract. However, Koppenjan et al. (2022) note that there is a need for the public actor to invest in a good contract to ensure performance. *Award criteria* can be part of the creation of a good contract.

The relational perspective, and its influence, makes for a large proportion of the findings in this research. The influence of *partnership (collaboration)* was the red line in the interviews conducted on the case studies. *Partnership* is found as an influence on various processes in all stages of the project. Similar as what is found in the literature, and summarised by Koppenjan et al. (2022), good collaboration can greatly influence performance in a positive way. As trust grows processes in the projects move along more efficiently, improving cost and time performance, while at the same time increasing quality.

A difference with the literature is the influence on innovation, there is limited to no evidence found in the case studies. In the interviews is noted that there is room for innovation, and that it is an aspect that is considered important. However, the influence of the performance drivers on innovation are not clear. It is noted however, that the contract form, and with that the *private financing* negatively influences innovation, as also suggested by the literature (Hueskes, 2019). This following the same reasoning that the consortium will behave risk adverse.

Another finding in this research is that DBFMO contracts are less and less attractive in the Netherlands as policy decisions from The Hague are limiting the Operate side of the contract. For instance, the cleaning and security side, that are part of the Operate phase, are back in the hands of the public actors.

5 | Conclusion

The theoretical framework answers the first sub-question, “how is performance defined for Public Private Partnerships in transport infrastructure?”. The assessment of performance in PPPs can be done from various angles. In this research the following four aspects are identified: cost performance, time performance, quality and innovation. The following sub-question is, “What are drivers for improved performance of Public Private Partnerships in transport infrastructure?”. The answer to this sub-question is based on the definition of performance. Five drivers for improved performance are identified in this research, which can be classified in to two perspectives, the contractual perspective and the relational perspective. The contractual perspective sees private financing, performance-dependent payments, bundling and risk transfers as drivers for improved performance. The relational perspective identifies collaboration as the fifth driver. The third sub-question is, “What are drivers for improved performance of a Public Private Partnership in office buildings?”. This question is answered by data from the case study. Performance drivers for office building projects are, *contract form, bundling, performance dependent payment, influence of award criteria and several aspects of partnerships*. The largest similarities with the theory on transport infrastructure PPPs, are the two perspectives. A perspective related to collaboration, which is named partnership, and a perspective on contract.

6 | Limitations

When considering the limitations of this research two aspects should be taken in account. First, the research design, and secondly the execution of the research. Regarding the research design, case studies provide a narrow view on a specific case, this can limit the relevance to other cases. However, as Palcic, Reeves and Siemiatycki (2019) note, there are experiences across projects that are comparable, which can result in lessons. A different research design, making use of more qualitative data, through for instance datasets on costs and time, can complement the findings of this research. The choice for the four performance indicators, based on costs, time, quality and innovation, can be considered narrow, as Verweij (2015b) notes. In future research more elements could be considerate, as governments are more and more considering other influences of PPPs, such as the environment, and the effects on surrounding areas. Reflecting on the execution of the research, the gathering of data has proven to be difficult in some instances. Next to that, the results are subject to the perception of the respondents and the interpretation of the author. A question that arises is related to the perception of the private sector regarding performance drivers, as the focus in this research is on the public sector. More simple, future research could also evaluate other projects in office building PPPs, comparing other sectors, or even differences between countries.

7 | References

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8 | Appendix

Appendix 1, coding tree.

