# Relational quality in public-private partnerships: understanding social relationships in contract-based exchanges

Relational quality in PPPs

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#### Abstract

**Purpose** – The purpose of this paper is to conduct a systematic literature review of studies addressing relational quality in public–private partnerships (PPPs). The ambition of this study is twofold: first, to present more clarity regarding the definition of the concept. Second, to develop a framework that explains the antecedents, characteristics and outcomes of relational quality in PPPs.

**Design/methodology/approach** – A systematic literature review of 99 academic articles, which were analyzed and coded on the definition, characteristics, antecedents and outcomes of relational quality.

**Findings** – The study shows that trust, communication, commitment, openness and reciprocity are considered core aspects of the concept. The analysis further identifies important antecedents (e.g. shared values, leadership) and outcomes (performance, innovation) of relational quality in PPPs. The findings result in the development of a framework on relational quality in PPPs to be used for further research.

**Research limitations/implications** – The findings indicate that relational quality is valuable for the functioning of PPPs, but the current focus of this review excludes studies addressing relational quality in other types of collaboration and public–private exchange. The lessons from these research fields might further improve people's understanding of relational quality.

**Practical implications** – Practitioners should pay attention to relational quality in long-term PPPs. Among others, (process) management activities might contribute to relational quality as it stimulates communication and openness.

Originality/value – The presented framework explaining antecedents, characteristics and outcomes of relational quality allows for more structured use of this concept in future research.

**Keywords** Public–private partnerships, PPPs, Relational quality, Systematic literature review **Paper type** Literature review

# 1. Introduction

Public–private partnerships (PPPs) are globally popular as a means of realizing public products and services. Its potential for efficient service delivery and the opportunity to share costs, benefits and risks has led to extensive use in many countries. A PPP can be defined as "a cooperation between public and private actors with a durable character in which actors develop mutual products and/or services and in which risks, costs, and profits are shared" (Klijn and Teisman, 2003, p. 137). Principal-agent and transaction cost theory are frequently used to explain how the exchange

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International Journal of Public Sector Management Vol. 36 No. 2, 2023 pp. 171-189 Emerald Publishing Limited 0951-3558 DOI 10.1108/IJPSM-02-2021-0034 between public client and private contractor in these partnerships takes shape. Elaborate contracts including formal requirements regarding performance, payment and sanctions are designed to prevent opportunistic behavior (Wang et al., 2018). However, the incomplete nature of contracts has sparked interest in the role of relational mechanisms. Earlier studies have pointed out the relational nature of contracting itself (see MacNeil, 1980). Socially embedded personal relationships play an important role in economic exchange (e.g. Granovetter, 1985). Various studies address the balance between relational and contractual mechanisms and emphasize the importance of relational aspects as complements to contracts in PPPs (e.g. Argento and Peda, 2015; Weihe, 2009; Warsen et al., 2019).

The growing attention for relational aspects in PPP research fits within a growing trend on relationality in, among others, the field of public administration. Bartels and Turnbull (2020) analyze this trend and show the varied use and overlapping and contested meanings of the concept. They refer to relationship marketing which addresses the role of relational quality in business—customer relationships (Bartels and Turnbull, 2020). It employs relational quality to determine the likelihood of continued exchange between salespersons and customers. Trust and commitment are considered fundamental principles (Crosby *et al.*, 1990). The relational marketing literature might useful as it extents the idea of relationality beyond more than mere trust. Instead, they have developed the concept of relational quality. Although alike in some aspects, PPPs differ from traditional business—customer relationships in their degree of complexity, the long-term nature of the exchange, and their network-like character (e.g. Alexander, 2012; Edelenbos and Klijn, 2007) in which internal and external stakeholders play an important role. Therefore, more research is needed to see if and to what degree the antecedents, characteristics and outcomes of relational quality in PPPs differ from those in the business—customer relationships addressed in relationship marketing theory.

# 1.1 The importance of relational quality for public-private partnerships

There is still much to learn about relational quality in contract-based PPPs. Attention for relational aspects in PPP research is lagging behind compared to the attention for contractual and risk-related topics (Weihe, 2009). The review of Wang et al. (2018) shows that relational topics are not among the most frequent topics in PPP research. This is quite surprising, as previous studies have shown relational quality is a particularly relevant concept in light of the complex and long-term character of PPPs (e.g. Argento and Peda, 2015; Weihe, 2009; Warsen et al., 2018). Contracts are unable to capture its full complexity nor take into account all potential events in the lifetime of a PPP (Brown et al., 2016). Hence, relational aspects are necessary to provide flexibility to deal with complexity and unexpected circumstances (Roehrich and Lewis, 2014).

So, relational quality might be important for the functioning of PPPs. But, although research into relational aspects is increasing, it is still fragmented. Existing studies focus predominantly on trust (e.g. English and Baxter, 2010; Warsen *et al.*, 2018) but relational quality consists of more than mere trust. Therefore, this review aims to synthesize the existing body of scientific research into this topic to achieve a coherent overview and robust conclusions on the concept of relational quality and its use for PPP research, by studying the antecedents, characteristics and outcomes of relational quality in PPPs. This leads to the following research question:

RQ1. How can we understand relational quality and what do we know about its characteristics, antecedents and outcomes in the context of public–private partnerships?

The ambition of this study is twofold. First, to present more clarity regarding the definition of the concept. Second, the findings of this review are translated into a framework explaining

quality in PPPs

Relational

antecedents, characteristics and outcomes of relational quality in PPPs. The specific focus on relational aspects makes this review stand out from other literature reviews on PPPs published in recent years (e.g. Osei-Kyei and Chang, 2015; Wang *et al.*, 2018). The remainder of this article first presents the methodology of this study. Next, the results of the review are presented. Finally, the concluding section presents several points for discussion and ideas for further research.

# 2. Methodology

This systematic literature review includes international peer-reviewed scientific articles on relational quality in PPPs. The selection was done according to the preferred reporting items for systematic reviews and meta-analysis approach (PRISMA) (see Moher *et al.*, 2009). This approach is widely applied in different research areas (Siddaway *et al.*, 2019) and successful systematic literature reviews in public administration (e.g. Voorberg *et al.*, 2015; Bouwman and Grimmelikhuijsen, 2015).

# 2.1 Study selection

To find all possible eligible studies for this review, an electronic search was done in the Web of Science and Scopus databases. These are two of the largest databases of scholarly articles and generated satisfying results in previous reviews on PPP research (e.g. Petersen, 2019). The search terms (see Table 1) were cross-checked with previous reviews to prevent the overlooking of any useful search terms (e.g. Osei-Kyei and Chang, 2015). Search terms referring to relational quality or relational aspects were not included, because a search using the term [relation\*] would result in all kinds of relationships (or correlations) and not necessarily refer to relational quality. Moreover, the term "relational quality" is not consistently used in PPP research. Following a wide search on PPPs, the selection of relevant studies discussing relational quality was dealt with manually.

#### Search terms

Public-private partnership\*

Public-private

Private finance initiative

PPP [abbreviation of public-private partnership]

PFI [abbreviation of private finance initiative]

Design build finance maintain

Design-build-finance-maintain

Design-build-finance-maintain-operate

Design build finance maintain operate

DBFM [abbreviation of design-build-finance-maintain]

DBFMO [abbreviation of design-build-finance-maintain-operate]

Build-operate-transfer

Build operate transfer

BOT [abbreviation of build-operate-transfer]

3P [abbreviation of public-private partnership]

P3 [abbreviation of public-private partnership]

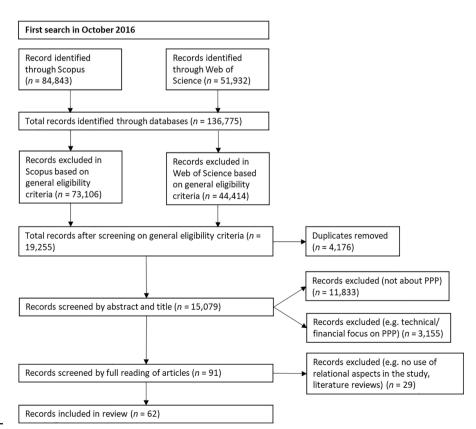
Table 1. Search terms used in the literature search

To decide on the inclusion of publications, some basic process criteria were applied. These included:

(1) Year of publication – All PPP publications from January 1990 to December 2021 were retrieved. The introduction of the private finance initiative (PFI) in the early 1990s in the UK was used as a starting point (Pollitt, 2005), which prevented the exclusion of early publications on PPPs.

- (2) Language As English is the dominant language in science, only studies written in English were considered for this review.
- (3) Publication Status Only peer-review journal articles were selected (e.g. Voorberg et al., 2015).
- (4) Field of study As PPPs are a multidisciplinary topic, this review included publications from different fields of study, including business administration, transport, construction and engineering, public administration and management (compare Wang *et al.*, 2018).
- (5) Design Both theoretical and empirical publications were considered. Existing literature reviews were excluded, but their references were used to search for additional relevant publications.

A first search in November 2016 in both search engines resulted in 130,000 + hits. After applying the aforementioned eligibility criteria and removing duplicates – using the Refworks citation manager – 15,079 articles remained (see Figure 1). Given the high number of potentially useful articles no other search strategies – like the inclusion of academic books – were employed. All articles were screened by title and abstract in two rounds. In the first round, articles without a focus on PPPs were removed [1]. In the second round, articles without a focus on relational quality were excluded [2]. The remaining publications (n = 91)



**Figure 1.** Search strategy round 1: 1990–2016

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Due to the rising interest in relationality in both public administration (see Bartels and Turnbull, 2020) and PPP research (for example Warsen *et al.*, 2019; Solheim-Kile and Wald, 2019) a second search was done in December 2021 to include relevant studies published since October 2016 (see Figure 2). The 1,750 hits resulting from this second search were screened using ASReview Lab (Van der Schoot *et al.*, 2021). To ensure optimal performance of the learning algorithm in ASReview Lab, six studies from the first search were included to help the algorithm "learn" which studies were relevant. After screening 700 (40%) articles, the screening was ended because no new relevant studies popped up. After full reading, 22 studies were removed because they did not focus on relational quality resulting in 37 publications.

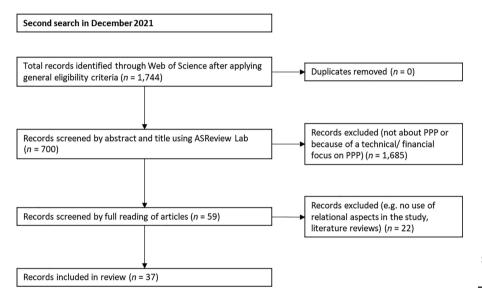


Figure 2. Search strategy round 2: 2016–2021

## 2.2 Data analysis

All 99 relevant studies were then analyzed and coded. To assess the risk of bias, a second scholar coded a randomized, small sub-sample of the data. This resulted in little difference compared to the original coding. The coding scheme included codes on the article (i.e. author(s), year of publication, field of study and methodology) as well as on the content of the article (the definition of relational quality, its characteristics, antecedents and outcomes).

### 3. Characteristics of the records found

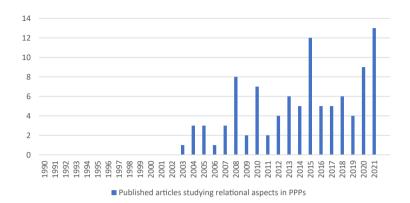
Before turning to the findings regarding relational quality in PPPs, this section first describes the characteristics of the records found. It shows widespread use and growing interest in relational quality in PPPs.

Starting with the latter, most articles included in this review are recently published (see Figure 3). This aligns with the observation of Guðrið Weihe (2009) that attention for relational aspects was relatively limited when she published her study in 2009. The increase in recent years might indicate that scientific attention for relational quality in PPPs is growing. This fits within a broader trend of an increasing number of PPP studies (Wang et al., 2018).

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**Figure 3.** Published studies on relational aspects in PPPs over time



The studies come from various countries, including early adopters, such as the UK, Australia and Canada as well as developing countries that have adopted PPPs in recent years, like Brazil, Jordan and Malaysia. Most publications study PPPs in the UK (13), the Netherlands (11), China (11), Australia (7), and the USA (6). Nine publications study PPPs in multiple countries. This reflects the spreading of PPP across the globe (Quiggin, 2019).

The studies are not only from different countries, but also from different fields of study. This is reflected in the 67 different journals the studies are published in. Most studies are published in public administration journals (37). Other dominant fields of study are management (18), business, finance and accounting (13) and construction and engineering (13). This broad range of journals indicates that the interest in relational quality of PPPs is not limited to one research area. In terms of research methods, qualitative research methods are dominant (see Figure 4), in particular case studies (50.5%). In recent years, however, there has been an increasing use of survey research. Only 9.7% of the studies prior to 2016 used this method, but its share rose to 19.2% when we also considered the studies published between 2016 and 2021.

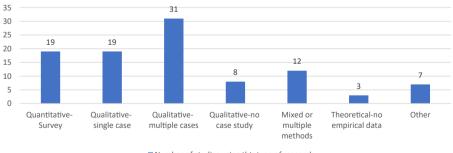


Figure 4. Used research methods

■ Number of studies using this type of research

All in all, the records confirm the increasing attention for relational aspects in PPPs in various research fields. Methodically, research on relational aspects in PPPs leaves room for further development as most articles are based on qualitative case studies.

Relational quality in PPPs

In this section, the four elements that are central to the research question are discussed. First, this section focuses on the conceptual messiness of the "relational quality." Building on an analysis of the existing studies, this section provides a clear definition of the concept. Next, this section addresses the characteristics, antecedents and outcomes of relational quality for PPPs. Finally, the findings of the review are used to present a framework that might be used for future studies into relational quality in PPPs.

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# 4.1 Defining relational quality in PPPs

The included articles are rather unanimous in their verdict that relational aspects are important in PPPs (e.g. Kumaraswamy *et al.*, 2015). Because of the shortcomings of contracts to structure partnerships, relational quality between public clients and private contractors are often seen as the road to successful PPPs. Despite consensus about the importance of relational quality, a clear, agreed upon definition is lacking. Reviewing the literature reveals three different issues: the lack of definition; variations in the kind of relationship (interpersonal or inter-organizational); and the use of adjectives to "define" relational quality.

First, the review shows a lack of definition of relational quality. In fact, most studies do not even use the term relational quality. Studies refer to trust(-based) relationships (e.g. Gazley, 2008) as opposite of formal, contract-based relationships. Terms like partnership relations (e.g. Roberts and Siemiatycki, 2015) or closely related concepts, such as relational governance (e.g. Zheng *et al.*, 2008) or relationship management (e.g. Smyth and Edkins, 2007) are often used. Following Jones and Noble (2008, p. 111) I define relational quality as "the quality and strength of social bonds based on mutual trust, commitment, and respect." Several publications in the review emphasize the social nature of these relationships (e.g. English and Baxter, 2010).

Second, these social bonds may exist on both an inter-personal level and an interorganizational level. Figure 5 shows that the vast majority addresses relational quality of inter-organizational relationships. This usually refers to dyadic relationships between a public client and a private contractor that develop throughout the lifecycle of the partnership. Significantly fewer studies focus on the quality of inter-personal relationships or address both. Inter-personal relational quality addresses the strength of the relationships between the public and private professionals working in PPPs. Finally, relational quality may exist on a network-level as PPPs can be considered networks (e.g. Edelenbos and Klijn, 2007). Alexander (2012) for example identifies multiple internal and external stakeholders in PPPs.

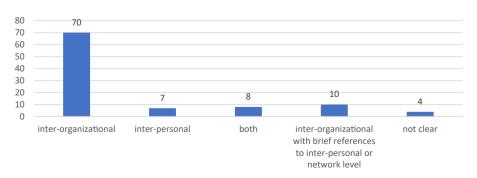


Figure 5. Various relationships addressed in the publications

■ Number of studies addressing this type of relationship

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Obviously, in PPPs, relational quality on both levels interacts with each other. Interorganizational relationships between a public client and private contractor consist of many inter-personal relationships between professionals. Governance and management instruments used in the inter-organizational relationship affect the behavior of individual professionals and hence the quality of inter-personal relationships. Simultaneously, inter-personal relationships influence relational quality on an inter-organizational level, as inter-personal trust and inter-personal communication might contribute to interorganizational relational quality between the public client and private contractor (e.g. Roehrich and Lewis, 2014). Yet, the long term of PPPs advocates for a focus on interorganizational relational quality, as individuals rarely stay long enough to see it through. So, to maintain relational quality among contracting parties, inter-personal trust should be translated into inter-organizational frameworks (Roehrich and Lewis, 2014). Following the majority of studies included in this review, the focus in this paper lies predominantly on relational quality on an inter-organizational level.

Finally, in absence of a clear definition of relational quality, most articles use adjectives. There is a strong focus on the importance of "good" relationships, which implies a high relational quality (e.g. Kumaraswamy *et al.*, 2015). The use of the term "good" suggests the opposite is possible. Relationships can also be weak, and relational quality poor. Attention for low relational quality is not prominent. Only a few articles address this explicitly (e.g. Panda, 2016; Edelenbos and Klijn, 2007). The description of relationships in positive and negative terms indicates that the use of the concept "relational quality" is justified. After all, it is not just about the existence of relationships, but also about the quality of these relationships.

# 4.2 Characteristics, antecedents and outcomes of relational quality

In this section, the most prominent characteristics, antecedents and outcomes of relational quality are presented. A full overview can be found in appendix. The analysis also learns that some concepts are mentioned in multiple categories (e.g. both as an antecedent and an outcome). Clearly, some concepts are closely intertwined and mutually reinforce each other. The relationships between these concepts are reciprocal, dynamic and difficult to disentangle (see also Lubell, 2007). To prevent confusion, this section includes each concept in only one category. The number of articles that position a concept as either an antecedent, characteristic or outcome variable, and the strength of the underlying arguments presenting the concept as such determine in how each concept is presented.

4.2.1 Characteristics of relational quality in PPPs. The articles suggest many different characteristics of relational quality in PPPs. Trust, communication and commitment are the most frequently cited (see Table 2) and were discussed in more detail below.

Trust is the most frequently mentioned characteristic (85×) and considered a core element of relational quality in PPPs (e.g. Appuhami *et al.*, 2011). It is used as a proxy for relational quality (Roehrich and Lewis, 2014; Smyth and Edkins, 2007; Zheng *et al.*, 2008). High levels of mutual trust imply high relational quality, whereas distrust is a characteristic of low relational

Characteristics	Number of articles mentioning it
(Mutual) trust Communication Commitment Openness Reciprocity	85 37 36 14

**Table 2.** Most frequently cited characteristics

quality. Trust might refer to both inter-personal trust between employees in a PPP as well as to inter-organizational trust between a public client and a private contractor. Furthermore, the various studies refer to different types of trust, including process-based trust (Edelenbos and Klijn, 2007), competence-based trust and goodwill trust (e.g. English and Baxter, 2010). Empirical evidence highlighting the role of trust on for example the performance of PPPs is present in several studies, making this a valuable characteristic to include.

Along with the notion of trust, commitment is another frequently cited characteristic of relational quality (36×). Commitment, defined as the state of being dedicated to a certain cause, is considered one of the fundamental principles in a partnership (Jacobson and Ok, 2008). Relational quality increases if both partners are committed to the project and their relationship. Morgan and Hunt (1994) explain this by suggesting that commitment reflects the attachment of a person to the relationship, project, or organization and implies a desire to maintain this relationship. The studies included in this review refer to both the commitment of individuals as well as to the commitment of organizations to the project.

Thirdly, relational quality in PPP is characterized by communication (37×). Communication can be defined as providing or exchanging information, for example by speaking or writing. It is used to share ideas, gain insight into the partners' interests and motives, and to convey norms and values. The frequency, tone and form of communication between a public client and a private contractor in PPPs tells us much about the quality of their relationship. Cook (2010, p. 232) for example states that "face-to-face interaction can offer a more personal and sometimes more convenient form of communication. [...] this facilitates rapid responses and can lead to a greater degree of trust and reciprocity."

Communication is closely related to the fourth characteristic, namely openness (14×). Openness, which can be considered a lack of secrecy, is another important characteristic of social relationships as it may help the building of trust and confidence in the partnership (Kumaraswamy *et al.*, 2015). Openness helps partners to get to know each other better and share information.

Finally, reciprocity is an important characteristic of relational quality (11×). The notion of reciprocity implies a social norm, namely the expectation that people will respond to each other in similar ways (Gouldner, 1960). The confidence that the relationship is characterized by reciprocity is important for both partners in the PPP to exchange for example information and knowledge for mutual benefit. Especially given the long-term character of PPPs, reciprocity is important to maintain high relational quality between the partners.

4.2.2 Antecedents of relational quality in PPPs. Antecedents of relational quality may range from individual characteristics (such as the competence of individual professionals working in PPPs) to antecedents on organizational level (leadership and management). Some can be applied on both inter-personal and inter-organizational level (e.g. prior ties). This section discusses five antecedents that are mentioned in a variety of studies: mutual understanding and shared norms, leadership and management, contract, prior ties and experience and competence (see Table 3).

Antecedent	Number of articles mentioning it		
Mutual understanding, shared norms and values Leadership and (process) management Contract Prior ties Experience and competence	20 16 13 12 10	Table 3.  Most frequently cited antecedents	
P		antecedente	

First, mutual understanding and shared norms and values between partners is the most frequently cited (20×, e.g. Appuhami *et al.*, 2011; Argento and Peda, 2015; Zhang *et al.*, 2009). Individuals may share norms and values, but shared norms on an organizational level also exist, as professionals tend to comply with the norms and values of their organizations. Hence, this antecedent can be used both on inter-personal and inter-organizational level. Zhang *et al.* (2009) explain how a mutual understanding and shared norms contributes to inter-organizational relational quality in PPPs: "The more values partners share (e.g. similar blueprints for the future or similar operational modes), the more solid their foundation for exchange will be, making it easier to communicate with each other." (Zhang *et al.*, 2009, p. 357). When partners share similar norms and values, they tend to understand each other better resulting in stronger commitment and better communication. In PPPs, divergent ideologies between public and private partners can make it more difficult to find common ground (Bergmann and Bliss, 2004, p. 388).

A second antecedent is leadership and management (16×). This organization-level antecedent suggests that relational quality can be improved by conscious efforts of the management of a PPP. Some studies provide convincing evidence supporting its effect on relational quality (e.g. Warsen *et al.*, 2018), making this a valuable antecedent to include in the framework. Particularly process management might foster trust and communication (Edelenbos and Klijn, 2007; Roberts and Siemiatycki, 2015).

A third antecedent is the role of the contract  $(13\times)$ . A typical antecedent for relational quality in PPPs, as contracts contain formal requirements regarding information sharing, communication, monitoring and sanctions. To a certain extent, contracts guide the interaction between partners and affect their behavior. Strict requirements limit the opportunities for flexibility and reduce the need for inter-organizational trust between client and contractor. On the other hand, contracts provide clarity, stability and reduce uncertainties, which is beneficial to the quality of the relationship between partners.

Furthermore, individual level antecedents may influence relational quality. For example, expertise and competence (10×) of professionals positively affect trust, as this antecedent is closely related to the notion of competence-based trust (e.g. Appuhami *et al.*, 2011; English and Baxter, 2010). Professionals should have the technical skill and managerial expertise to realize the project. A lack of experience, for example with public–private partnerships as a procurement method, hinders the building of trust (Zheng *et al.*, 2008). Individual incompetence might also reflect badly on the entire organization and as such impact interorganizational relational quality.

Finally, prior ties are often mentioned as an important antecedent  $(12\times)$ . This antecedent is testimony of the dynamic character of relational quality. Relational quality can change over time. Relationship quality at moment T is affected by the quality of the same relationship at moment T-1. Relational quality in PPP is not "a one-time only affair" (Edelenbos and Klijn, 2007). Individual professionals or organizations who have collaborated before already know each other and are, depending on the results of the prior collaboration, more or less inclined to trust each other.

The impact of the various antecedents may vary over time. Some antecedents, such as the prior ties, are particularly relevant for relational quality at the start of a relationship. Other antecedents influence relational quality throughout the lifecycle of the PPP and might play an important role in maintaining high relational quality or improving low quality relationships.

4.2.3 Outcomes of relational quality in PPPs. Relational quality is generally considered important for the outcomes of public–private partnerships. In this section, the most frequently cited outcomes of relational quality in PPP are discussed. This includes broad

The review clearly shows a correlation between relational quality and performance in PPPs (e.g. Roehrich and Lewis, 2014). Several studies provide empirical evidence suggesting that relational quality has an effect on the success of PPPs: "... Personal relationships, mutual trust, and informal agreements are critical to the resolution of issues and can impact on the progress and forward momentum of the project." (Jones and Noble, 2008, p. 113). Consequently, low relational quality is an obstacle (Mistarihi *et al.*, 2013). However, good performance in PPPs might imply many things. Much has been written about the evaluation and multiple dimensions of PPP-performance, which include among others on-time and onbudget delivery, efficiency and innovation (e.g. Hodge and Greve, 2017), enhanced conflict and problem-solving capacity (Argento and Peda, 2015) and more flexibility (Zheng *et al.*, 2008) (see Table 4).

Another frequently mentioned concept is information exchange  $(10\times)$ . Although it has been included in many studies, its relation to relational quality is less univocal as the concept has been used both as an antecedent and outcome of relational quality. Sharing information, as an indicator of transparency and openness, increases trust – an important characteristic of relational quality (Keranen, 2017). Simultaneously, several studies show how high relational quality stimulates the exchange of information (e.g. Magoola *et al.*, 2021). Information exchange and relational quality might reinforce each other. However, information exchange is included in this section, as it has been reported most often as a potential outcome of relational quality in PPPs.

Innovation is also positively related to relational quality (10×, e.g. Badi and Pryke, 2015). One of the articles explains that innovation is "... largely dependent on the collective, dynamic and interactive relationships among multiple project participants" (Badi and Pryke, 2015). Only in PPPs with high relational quality there is sufficient trust between partners to be willing to take the risks that come with innovation.

Finally, collaboration is mentioned as an outcome of relational quality in PPPs (9×). Collaboration seems strongly intertwined with the notion of relational quality (e.g. Jones and Noble, 2008). Bergmann and Bliss (2004) for example state that collaboration can help build trust, and simultaneously claim that trusting relationships are prerequisites for collaboration. This runs the risk of tautology, but it also points toward an iterative, and mutually reinforcing effect between these concepts. Although relational quality is dynamic and can be influenced by the way partners collaborate, both concepts are not the same. Collaboration, defined as the process of multiple people or organizations working together to achieve something, is a form of action and interaction by and between partners. Relational quality, in contrast, is not an act (-ion) performed by people, but a state of attachment. While it is important to clearly distinguish both concepts, the studies in the review clearly show that collaboration is a potential outcome of relational quality in PPPs (Bergmann and Bliss, 2004).

Outcome	Number of articles mentioning it		
PPP performance Success of PPP Information exchange Innovation Collaboration	21 19 10 10 9	Table 4. Most frequently cited outcomes	

4.3 A preliminary framework of relational quality in public-private partnerships

The findings of the systematic literature review are combined in a preliminary framework of relational quality in public–private partnerships (see Figure 6). The framework simplifies the complex, non-linear and reciprocal relationships between public clients and private contractors in public–private partnerships to some extent. However, it may serve as a starting point for more elaborated study of the relational quality.

Figure 6 shows the most frequently cited antecedents on various levels. On an individual level, experience and competence of individual professionals working in PPPs can be considered relevant. On the project level, the role of leadership and (process) management within the PPP is important. These antecedents on individual, project and organizational level play a role in determining inter-organizational relational quality. The box in the middle presents the characteristics of inter-organizational relational quality, which concerns the quality and strength of the relationship between the private client and the public contractor. However, several scholars also noticed the importance of inter-personal relational quality. Furthermore, we might need to consider relational quality beyond the dyadic relationship between client and contractor as a PPP often includes multiple internal and external stakeholders. Although studies in this respect are still scarce, relational quality on one level might affect relational quality on another. Therefore, inter-personal relational quality (box with dotted lines) and relational quality on a network level (circle) are also represented in the network. The arrow between inter-organizational and inter-personal relational quality indicates the interplay between the two. An important remark in this respect is that relational quality is not static, but dynamic. Especially given the long-term character of PPPs, relational quality is likely to change during the course of the PPP.

Turning toward the outcomes, relational quality is likely to have a positive effect on the success of PPPs. Several articles in the review suggest a direct effect, claiming that high relational quality enhances PPP performance. This preliminary framework presents an indirect effect as relational quality also affects the process of a PPP, stimulating innovation, information exchange, and collaboration, which in turn lead to better performance, such as effectivity or efficiency.

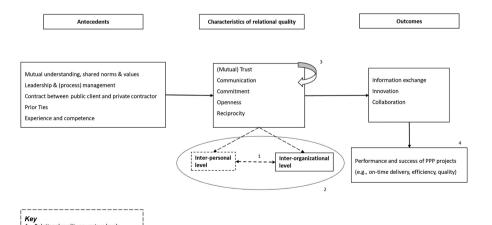


Figure 6. Preliminary framework of relational quality in PPPs

PPPs as more than dvadic relationships

Relational quality as dynamic concept
Indirect effect on performance

Relational

quality in PPPs

#### 5. Discussion and conclusion

This study took stock of the scientific knowledge on relational quality in PPPs to provide more conceptual clarity and a framework than can be used for further research. This section first provides an answer to the research question. Next, this leads to the presentation of potential research avenues. The limitations of this study are also addressed, and finally, we discuss some implications for practitioners.

First, we turn to the central research question of this paper. The findings show that few studies define relational quality. Instead, many studies use adjectives and speak of "good", or "strong" relationships. However, this review has shown that relational quality can be defined as the quality and strength of social bonds and is characterized by more than mere trust. It also includes communication, commitment, openness and reciprocity. Relational quality can be studied on both inter-personal as well as inter-organizational relationships. Consequently, antecedents can be found on both levels. Many of these antecedents stimulate contact and help partners getting to know each other, such as a mutual understanding, leadership and management, or the existence of prior ties. There is little debate regarding the importance of relational quality for successful PPPs. Performance, innovation, information exchange and collaboration are the most frequently cited outcomes of relational quality. The findings result in a framework that can be used to further study the role of relational quality in PPP.

Assessing the strengths and limitations of the literature (Siddaway et al., 2019), a few things stand out. First, the included studies show great diversity. Studies address PPPs in a large variety of countries, including both early adopters of PPPs as well as relative "newcomers." Moreover, different fields of study have addressed this topic. This emphasizes the relevance of the topic from both a governance, project management and economic point of view. Second, the methodological diversity of the studies addressing this topic is limited. Although the qualitative studies provide rich information, there are few studies that are able to test potential correlations or causal effects. The strength of the evidence regarding the effect of the antecedents and the effect of relational quality on the functioning of PPPs is therefore somewhat limited.

Both the findings of the review and limitations of the existing literature have implications for scholars aiming to study relational quality in PPPs. First, this review has shown that relational quality exists on multiple levels. Yet, existing studies provide little insight into the dynamics between relational quality on these levels. Future research could consider the different levels to assess if and to what degree connections between inter-organizational and inter-personal relationships are dependent on various characteristics, antecedents and outcomes. Second, several case studies have shown that relational quality might change over time. Combined with the long-term nature of PPPs, this argues for more longitudinal research to understand the development of relational quality, and the effect of the different antecedents in different phases of the relationship. Third, the positive connotation with relational quality has resulted in an disproportioned number of studies focusing on high relation quality in PPPs. The scholarly attention for low relational quality (e.g. poorly developed, low-trust relationships) remains low (see Panda, 2016). What hinders the development of relational quality in these partnerships? This lacuna provides opportunities for further research. Finally, this review has shown that there is room for methodological developments in research into this topic. Despite a recent increase of survey research, research into this topic is still dominated by qualitative case study research. Therefore, there is a need to properly test the suggested effect of the antecedents, characteristics and outcomes. It is thus important to test the various hypothesis that result from the framework to strengthen the body of evidence on relational quality.

As with any study, this study also has its limitations. The first limitation is related to the data selection and analysis. The decision to not use search terms referring to relational quality, but to address this manually in the subsequent screening phase might imply that we might have missed

out on articles that would have been included using specific search terms. After all, a manual search always leaves room for error. Moreover, only studies published in international peerreviewed journals were included, because peer review can be considered a quality check. Other scientific output such as conference papers, books and dissertations were not included, although some of these papers or chapters are also published as peer reviewed journal articles. As it is more difficult to publish null findings, this decision might pose a risk of publication bias. Therefore, further research should include rigorous testing of the model to validate the findings of this review. A second limitation is the fact that this review included only articles studying relational quality in PPPs, whereas relational quality could also be studied in other forms of collaboration and public-private exchange. Still, much of the findings of this study seem applicable to other forms of collaboration as well. There are, however, four aspects that distinguish PPPs and make this topic is particularly relevant for PPP research. First, PPPs function in a highly dynamic and complex context, resulting in many uncertainties for the partners in these PPPs (e.g. Irun et al., 2020). This emphasizes the incomplete character of contracts and increases the need for high relational quality. As contracts are inherently incomplete, relational quality determines how public and private partners in the partnership behave the moment the contract cannot solve the existing uncertainties and complexities. Second, in PPPs, partners are motivated by different drivers, and some of their goals are difficult to align. This poses a challenge for building high quality relationships. This is further complicated by the various internal and external stakeholders that are involved in the PPP (e.g. Alexander, 2012). Although the contract is signed by one public principal and one private agent, these organizations are not always single entities. For example, the Special Purpose Vehicle, designed to represent the private contractor in the communication with the public client, often consists of multiple private companies. Unlike the principal-agency theory suggests, PPPs are not dyadic relationships. Hence, the complex relationships between various stakeholders make the achievement of high relational quality particularly challenging in PPPs. Thirdly, PPPs are long-term relationships lasting for multiple decades. This presents significant challenges for inter-personal relational quality, due to personnel turnover. It also provides strong incentives and opportunities for building and maintaining high quality inter-organizational relationships in PPPs (Mu et al., 2021). Finally, there are particularly strong financial incentives in PPPs. The role of the financiers embodies this as financiers guard the progress and performance and emphasize the importance of risk management, on-time and on-budget performance. Consequently, the focus is less on relational quality. Hence, it is more challenging to realize high relational quality in PPPs.

Finally, the findings highlight two key implications for practitioners. First, the potential outcomes of relational quality imply that attention for relational quality in these partnerships is vital. From the very start of the PPP and throughout its lifecycle, relational quality between public client and private contractors involved in the partnership deserves attention, both on inter-personal and inter-organizational level. For example, the use of (process) management activities that stimulate informal, frequent communication, openness and reciprocity between partners might help build relational quality. Second, the review also reveals the vulnerability of relational quality due to the long-term character of PPPs. That does not only allow for relationship-building, but the risk of personnel turnover also poses challenges to maintaining high relational quality throughout the PPPs lifecycle. Both the public client as well as the private partner should pay attention to securing relational quality on various levels and requires practitioners to think about how they might be able to translate inter-personal relational quality into inter-organizational relational quality.

All in all, this review synthesizes the existing literature on relational quality in PPP. It contributes to our understanding of the concept and presents a framework that can be used to advance further research into this topic. Although there are various methodological and empirical research avenues to be explored, relational quality in public–private partnerships deserves attention from scholars and practitioners alike.

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#### **Notes**

- 1. This included for example articles using the term BOT (referring to computer sciences) or PPP (the abbreviation of Power Purchasing Parity a term frequently used in economics). This also applied to studies that briefly mentioned PPPs, but did not use the concept in their research otherwise.
- 2. For example: articles discussing technical or financial aspects of public-private partnerships

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(The Appendix follows overleaf)

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# Appendix

This appendix provides a full overview of the characteristics, antecedents, and outcomes identified by the studies included in this review. The frequency refers to the number of studies that mentioned that particular characteristic, antecedent, or outcome.

188	Characteristic	Frequency	Characteristic	Frequency
	Trust	85	Relational governance	2
	Communication	37	Relational management	2
	Commitment	36	Culture	2
	Openness	14	Care	2
	Reciprocity	11	Social ties	2
	Respect	9	Partnership spirit	2
	Information sharing	9	Joint problem solving	2
	Shared norms and values	9	Social infrastructure	1
	Shared goals	8	Passion	1
	Willingness	7	Sense of belonging	1
	Confidence	7	Solidarity	1
	Social capital	7	Clear roles	1
	Reputation	4	Organizational structure	1
Table A1.	Reliability	4	Proximity	1
Overview of the	Fairness	3	Equality	1
potential	Flexibility	3	Joint image building	1
characteristics of	Conflict management	3	Relational coordination	1
relational quality	Collaboration	3	Relational skills	1

Antecedent	Frequency	Antecedent	Frequency
Communication*	22	Organizational reputation	4
Mutual understanding and shared values	20	9 1	
Leadership and management	16	, and the second	
Contract	13	13 Risk allocation	
Prior ties	12	12 Right partner	
Experience and competence	10	0 1	
Personnel turnover	8	Relationship management	
Organizational characteristics	8	1 0	
Information sharing	7	7 Political commitment	
Common interest	7	7 Working before payment	
Intentions/reliability	7	7 Stereotyping	
Transparency	6	C T1 1111	
Collaboration	6	Reflexivity 1	
Culture	6	Ownership 1	
Personal characteristics	5	Capacity building 1	
Boundary spanning	5	Procedural fairness 1	
Monitoring	4	Interim joint victories	1

**Table A2.**Overview of the potential antecedents of relational quality

Note(s): \* Many studies mentioned communication as a core characteristic of relational quality, while others addressed it as an antecedent of relational quality. This shows the mutually reinforcing character of various relational aspects. However, to avoid confusion in the main text, communication was only discussed as a characteristic of relational quality

Outcome	Frequency	Outcome	Frequency	Relational quality in PPPs
Performance	21	Continuation of the relationship	4	1 3
Success	19	Effectiveness	4	
Information exchange	10	Solidarity	3	
Innovation	10	Value	3	
Collaboration	9	Opportunistic behavior	3	
Problem and conflict solving	8	Uncertainties	3	189
Stability and resilience	8	On time delivery	2	
Efficiency and transaction costs	7	Progress	2	
Satisfaction	7	Management	2	
Flexibility	6	Quality	2	Table A3.
Better outcomes	6	Change of leadership	1	Overview of the
Contract refinements	5	Use of sanctions	1	potential outcomes of
Sustainability	5			relational quality

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