

## **Public Private Partnerships: added value by organisational form or management?**

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### **Summary**

The central idea of public private partnerships (PPPs) is that added value can be achieved from greater co-operation between public and private actors. In general, the literature speaks of PPPs in which public and private actors develop a more or less sustainable co-operation through which they realise products, services, or policies together, share risks and develop an organisation form to arrange this. The assumption is that a higher degree of PPP leads to more and better outcomes because public and private actors combine their knowledge and resources. One can find a wide array of organisational forms in which this co-operation is organized and the literature pays a great deal of attention to these forms. But is this organisational form really so important, or are the intensity and type of managerial strategies more important for the outcomes? Based on a large survey of individuals involved in Dutch environmental projects, we show that although the degree of PPP correlates positively with the outcomes of projects, this correlation disappears when we include in the analysis the number of managerial strategies employed. The organisational form does not have significant impact on outcomes and the conclusion we draw is that scholars and practitioners of public private partnerships should pay greater attention to the managerial efforts necessary to develop and implement PPPs.

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## 1. Introduction

Public Private Partnerships (PPP) have become a popular policy instrument in many Western European countries. Governments assume that the involvement of private actors in the provision of services, or in the realization of policy goals will increase quality and provide better value for money. It is believed that more intense co-production between public and private actors will generate better results. In the literature on PPPs, these benefits are typically referred to as “added value” (Osborne, 2000; Ghobadian et al., 2004).

A PPP can be seen as a specific type of governance network which can roughly be defined as “more or less stable patterns of social relations between mutually dependent actors, which form around a policy program and/or a cluster of means, and which are formed, maintained and changed through series of games” (Koppenjan and Klijn, 2004, 69-70). Crucial to the emergence and existence of networks are the dependency relations between actors (Benson, 1982). A governance network embraces all relevant stakeholders in the network concerning the development and/or implementation of a policy program or project. The concept of public private partnership specifically focuses on the interrelation between public and private actors and between governmental and commercial parties. Klijn and Teisman (2003) describe such a partnership as “more or less sustainable cooperation between public and private actors in which joint products and/or services are developed and in which risks, costs and profits are shared”. This rules out phenomena like outsourcing or privatization where a specific service is provided by the market on the basis of a preconditioned set of requirements.

The concept of PPP concentrates therefore on a specific part of actor interrelations within the whole governance network. Dynamics in the PPP have a significant influence over the dynamics of the whole governance network and vice versa. For example, when a planning vision has been developed in the PPP network, stakeholders (NGOs, citizens, etc.) in the wider network may obstruct this vision and influence its subsequent development. According to the literature in this area, the main characteristics of PPP are:

1. *Mutual coordination of activities* and daily routines: Coordination is essential for any partnership, including public-private ones. The activities of the public and private organisations have to be well co-ordinated (Mulford and Rogers, 1982; Faulkner, 1995) or the desired exchange of information cannot be realized (Savas, 2000).
2. A level of *shared risk and profit sharing* is needed: The co-operation between public and private actors has to result in at least some risk sharing, and if possible, in some level of profit sharing (Huxham and Vangen, 2005). Authors point out that profit sharing does not always have to take the form of financial profits. It may be that the private actors have financial profits and the public actors get recognizable societal benefits from the co-operation, for instance a higher quality of service (Audit commission, 2003; Hodge and Greve, 2005).

3. A form of *organisational arrangement* between the partners to enhance the cooperation process (see Savas, 2000; Hodge and Greve, 2005). Most partnerships are structured around organisational arrangements that are meant to simplify co-ordination and secure the shared risk and profits. These arrangements can take the form of an informal project group, newly established consortiums or other hybrid organisational forms (Faulkner, 1995; Waddock, 1991).

The overall assumption is that the PPP enhances outcomes. To phrase it differently, if we see the three characteristics mentioned above as a description of the ‘*degree of PPP*’, one would expect projects with a higher degree of PPP (i.e. projects where there is more risk sharing, mutual coordination and organisational arrangement) to show better results than projects without those characteristics. After all, if that is not the case, what is the use of the whole discussion?

In this article, we take a closer look at the fundamental assumption that PPPs lead to better outcomes. We test this using data obtained from a large survey of individuals involved in environmental projects in The Netherlands. The use of data related to environmental projects is highly relevant to the general discussion about PPP projects, because PPPs – at least in the Netherlands – are strongly dominated by such projects (see Ecorys, 2002; and Kenniscentrum 2002; 2004). However we must acknowledge that in The Netherlands PPP forms like the UK PFI partnerships which are structured by fairly tight contracts are relatively scarce. So although we see a lot of public private partnerships in The Netherlands, they tend to be more ‘loosely coupled’ in contractual terms at least, compared to their UK counterparts.

In addition to the above objective, we want to explore two possible explanations for why some PPPs are more effective than others. In the literature two mechanisms have been identified as potential mediators of the relationship between PPPs and their subsequent outcomes: organisational characteristics (the organisational form in which the partnership is organized) and managerial activities (the actual co-ordination of activities within the network). In this article, we seek to determine which of these two factors contributes more to the outcome of PPPs. Our research questions thus are:

1. To what extent does the degree of PPP employed in a project affect its outcomes?
2. Which factor is more important with respect to these outcomes: the organisational form, or managerial effort?

In the second section of this article, we will look at the literature on partnerships and discuss the assumptions that are frequently made about the effect of various organisational forms and managerial strategies on project outcomes. In Section 3, we will explain the research methodology employed. Section 4 and 5 will present an empirical analysis of the data and Section 6 draws conclusions and generates discussion.

## 2. PPP: exploring assumptions

Under the broad definition of partnership we presented in the first section, many different forms of public-private partnerships can be found. We find partnerships that are characterized by tight organizational forms or loosely coupled forms and partnerships that are characterized by a principle agent relationship between public and private actors or by a more equal relationship (see for this: Klijn, 2010 forthcoming). An example of a public private partnership with a principle agent relation and strong contractual ties is the UK PFI partnerships where public actors use long term and detailed contracts to tender out both the financing, realising and maintaining of a product or service. On the other hand we also find joint consortia established by the partners together (tight form principle-principle relation) and more network like partnerships (principle-principle relations and more loosely coupled organizational form). In general the last two forms seem to be dominant in The Netherlands, although we do also find some strong contractual forms.<sup>1</sup>

### *Better performance through partnerships*

However whatever form of PPP we are talking about, the assumption that a PPP leads to better value for money and thus better outcomes can both be found in all the government documents (NAO, 2002, ODPM, 2002, 2004; Kenniscentrum, 2002) as well as in the academic literature (Savas, 2000; Osborne 2000; Klijn and Teisman, 2003; Hodge and Greve, 2005). In their evaluation of a PFI (a form of PPP), established in relation to British schools, The British Audit Commission (2003) states that it provides a) better value for money, b) buys services and not things, c) provides better risk management, and d) leaves a long term legacy. We find the same kind of arguments in other countries, like the Netherlands (see Kenniscentrum, 2002).

In general, these outcome related improvements can take several forms. The literature speaks mostly in terms of securing the same outcomes for lower costs (efficiency), or greater outcomes for the same cost (added value) (Kenniscentrum, 2002). One could however add a third category of innovative solutions, or solutions that have not been achieved before (Borys and Jemison, 1989; Faulkner, 1995; Hodge and Greve, 2005):

- *More efficiency:* Partnerships and the co-operation they engender result in lower costs and greater efficiency (Savas, 2000; McQuiad, 2000). One example of this is in the area of building projects where decisions might be made faster. Of course, more intense co-operation implies greater transaction costs, which should not exceed the possible revenues (Williamson, 1996).
- *Added value:* Public and private actors can add value to each other's performance because their efforts enhance the value of the product or service that is being delivered. The classic example is that of a co-operative effort of drafting a master plan for a newly built neighbourhood that gives coherence to the total project, and thus raises the value of the individual dwellings.

- *More innovative results*; another often heard advantage of partnerships is that actors are able to realize better, more innovative solutions by harnessing each other's knowledge and expertise, (Huxham and Vangen, 2005; Parker and Vaidia, 2001).

All else being equal, one would expect that partnerships involving a higher degree of PPP would have a better division of risks, greater co-ordination activities, and more organisational arrangements which would all serve to generate better outcomes.

*Hypothesis 1: A higher degree of PPP leads to better project outcomes compared to projects with a lower degree of PPP.*

It is implicitly assumed in the literature that PPP arrangements are necessary to address the more complex (societal) problems and projects involving public services. After all, why would one need a PPP for simple problems that can be addressed using far simpler tendering and outsourcing arrangements (see Kenniscentrum, 2002; Hodge and Greve; 2005)? Neo-institutional economics stress the use of less complex arrangements whenever possible, (see Williamson, 1996) and one would expect a higher degree of PPP in projects that are more complex. This leads us to our second hypothesis:

*Hypothesis 2: Projects that are more complex will be characterized by a higher level of PPP than simpler projects.*

*PPP: towards more tightly organized forms?*

PPPs are used across a wide variety of organisational forms ranging from strongly contractual arrangements such as the PFI contracts in the UK and more informal arrangements such as project groups lacking any formal judicial status to very tightly organized consortiums. The discussion on the choice of organisational form is fairly prominent in the partnership literature, and even more prominent in the government texts (NAO, 2002; Kenniscentrum, 2002; 2004). However, one cannot find definitive statements about which organisational form is best for partnerships.

If we look at the most prominent theoretical perspectives currently used in the PPP literature, namely, the resource dependency perspective and neo-institutional theory, one can conclude that the overall expectation is that more tightly formalised forms generate better results (Benson, 1982). The resource dependency perspective suggests that the more dependent partners are on each other, the larger the need for their interactions to be more formally organized (see Mulford and Rogers, 1982). Partnerships are typically organized because players hope to achieve added value by making their achievement of their goals contingent on the actions of the other partner. For this reason, partnerships can be said to be characterized by a high level of dependency. The same argument can be derived from a neo-institutional economic perspective. Partners choose to invest in the relationship and thus incur specific transaction costs that they cannot then deploy in alternative relationships (Williamson, 1996). This serves to increase both dependency and the problem of opportunistic behaviour. The risk of one partner behaving

opportunistically tends to lead to the creation of tight organisational structures in which partners try to minimize the possibility of the other partner walking away with a large share of the profits.<sup>2</sup> As a result, one can expect that a high degree of PPP would be associated with a correspondingly high level of formalization in the organizational structure, and subsequently, with better outcomes. These assumptions are presented in Hypotheses 3 and 4.

*Hypothesis 3: A higher degree of PPP is related to a more formalized and tightly structured PPP organisational form*

*Hypothesis 4: A more formalized and tightly organized form of PPP leads to better PPP project outcomes.*

### *PPP and managerial strategies*

Much like the business administration literature on strategic alliances, the PPP literature emphasizes the importance of the managerial efforts that are made in the partnerships (see for instance Niederkofler, 1991, Borys and Jemison, 1989). At the same time, one can also recognize ideas in the PPP literature that are derived from the substantial stream of literature on governance. An example of this is the assumption that co-production between public and private actors results in the greater exchange of information and in the mutual sharing of knowledge. This sharing is assumed to generate better, more innovative products and policy outputs for complex societal problems. Although this literature does mention organisational structure and form (Mandell, 2001), it does tend to stress institutional and managerial activities or strategies as being critical to the achievement of good outcomes. These managerial efforts are dubbed *network management* (Mandell, 2001; Agranoff and McGuire, 2001; Meier and O' Toole, 2007; Koppenjan and Klijn, 2004). The literature on governance suggests that without these managerial strategies, it is difficult, indeed almost impossible to achieve desirable outcomes (for an overview, see O Toole, 1988; Agranoff and McGuire, 2001; Klijn, Edelenbos and Steijn, 2010)..

The number of network management strategies that have been dealt with in the literature is impressive (see Mandell, 2001; O'Toole, 1988; Agranoff and McGuire, 2001). It is clear, however, that if the network manager is to achieve significant outcomes, he has to implement a range of different strategies (see Mandell, 2001; Kickert et al., 1997; Agranoff and McGuire, 2001). In general, one can make out four different categories of network management strategies: connecting actors, exploring content (creating more variety, organizing research, exploring the perceptions of different actors etc), arranging the structure of the interaction (securing a temporary organisational arrangement for interactions) and establishing process rules (designing temporary agreements and rules to govern interactions) (see Klijn, Edelenbos and Steijn, 2010). The literature appears to stress the importance of these strategies, leading one to draw the conclusion that in general, networks and projects that employ a number of different strategies will achieve better results.

Some scholars approach network managers as individuals who have the explicit role or function to manage the network (c.f. Meier and O'Toole, 2007). However, management is not the act of one individual exclusively. Many individuals in the network may be performing management activities and different people may have impact on the interrelations between actors and the development of collaborations (Kickert et al, 1997). In other words, management is an activity that can be conducted by one or more actor working simultaneously. This leads us to the following two hypotheses:

*Hypothesis 5: A higher degree of PPP is related to the use of a greater number of managerial strategies*

*Hypothesis 6: The greater use of network management strategies leads to better PPP outcomes*

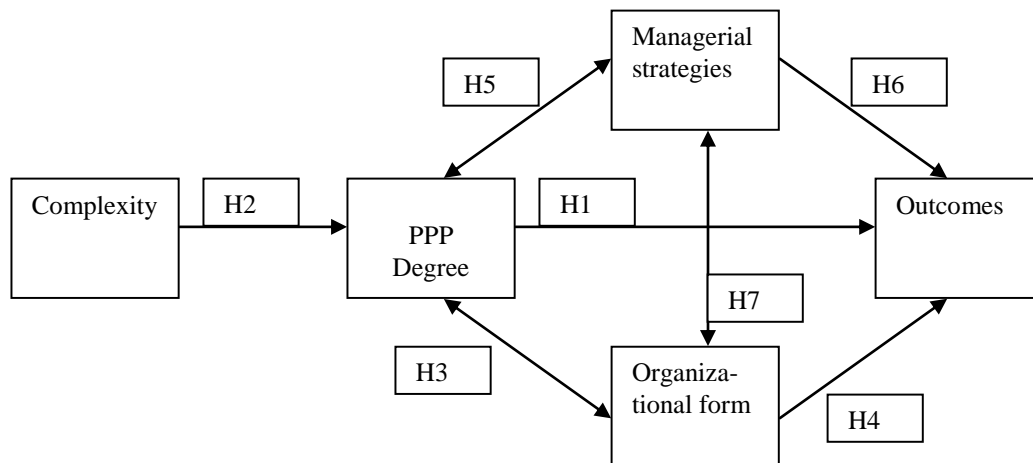
*Conclusion: organisational form or managerial strategies?*

As seen in the previous section, the literature holds a number of varied assumptions about PPPs and how to achieve the added value that is often acclaimed as being their result. Thus far, we have explored several of these assumptions and formulated hypotheses to test them. However, above all, our main objective is to determine whether managerial strategies will contribute more to outcomes than the organisational form employed.

Partnerships involve complex decision-making processes which are characterized by unforeseen events. This is true not only of the strategies of the various partners involved, but also of the actors in the network surrounding the partnership who often become part of the decision-making process simply because of the fact that such partnerships are meant to result in societal benefits connected to the public and political life of larger communities. This implies that formal managerial activities as well as the improvisations made during the partnerships will be crucial to its success (Klijn and Teisman, 2003). This leads to Hypothesis 7:

*Hypothesis 7: PPP's organisational form is less critical than the network management strategies employed in determining the outcomes of PPP projects.*

With this last hypothesis, we can sketch the conceptual model that summarizes the essence of our ideas.



*Figure 1: conceptual model of the main argument*

### 3. Methodology of the research: assessing outcomes and level of PPP

Network management has been studied for many years (Benson, 1982; Kickert et al., 1997; Agranoff and McGuire, 2001) and most studies on network management strategies are based on single or multiple case studies (for a short overview, see Agranoff and McGuire, 2001; Klijn, Edelenbos and Steijn, 2010). Although a lot of qualitative research has been done on governance networks so far, the question of how network management strategies influence outcomes has not been thoroughly addressed. In particular, studies with large-enough samples are scarce. Some qualitative studies have demonstrated that management matters and that it has a significant impact on the process and the outcome of governance networks (c.f. Agranoff and McGuire, 2001; Edelenbos and Klijn, 2006). However, few quantitative studies have been conducted that have sought to generalize this finding (for exceptions, see Meier and O'Toole, 2007; Klijn, Edelenbos and Steijn, 2010).

In this article, we seek to generalize findings on the relationship between network management strategies and governance network outcomes. The use of more quantitative methods are very well suited to this objective. Quantitative and qualitative research are complementary in that the later can be used to generate interesting findings, to build theory, or to test specific ideas that need close examination. For example, an understanding of the formation and construction of network rules lends itself to qualitative analysis and may not be well captured by more quantitative research). At the same time, quantitative research can be used to test theoretical assumptions that have been generated by means of case research, or to detect patterns which then can be looked



at in greater depth. Indeed, the quantitative research in this article builds on the earlier qualitative work that we have done (see Edelenbos and Klijn, 2006).

### *Respondents*

Data from projects that employ varying degrees of PPP is necessary to test our hypotheses. We used a data set derived from an internet survey held between December 2006 and January 2007 that polled individuals involved in Dutch environmental projects. The survey yielded a large number of respondents (N=323) who were involved in different projects and could answer our questions about the relationships between the nature of the projects (the degree of PPP), the organisational form, the managerial strategies employed, and the outcomes of the projects.

Although we were able to achieve a significant sample size, the problem with surveys like this is the absence of a complete list of all environmental projects embarked upon in recent years, much less a list of all the individuals directly or indirectly involved in them. To locate respondents, we used the database of a large knowledge organisation in The Netherlands called Habiforum. Professionals (practitioners, consultants, scientists) from the spatial domain participate frequently in this knowledge network (see also the appendix)

We deliberately sought respondents who would be able to answer our questions and thus should have experience with these projects. Therefore they were asked to answer the questions for a specific project they were involved in most of their time

Respondents were predominantly male (83.4%), middle aged (48 years) and highly educated (80.7% had a university degree). On average, they had 12.24 years experience with environmental projects and four different categories of project involvement could be discerned: 1) 12.0% followed the project 'from a distance' ; 2) 23.4% were 'thinking along with the project'; 3) 35.7% 'actively participated in the project'; 4) 28.8% were managing the project. We can thus see that the majority of respondents (almost 65%) were heavily engaged in the project they responded about in the survey.

Respondents were found to come from four different backgrounds: 1) national civil servants (10.7%); 2) local civil servants (included also civil servants from counties) (28.5%); 3) private sector respondents (48.3%); 'others' (12.4%). The last group mostly involved respondent from stakeholder organisations like environmental groups.

### *Characteristics of the projects in the survey*

Since each of the respondents answered the questions for a specific project, it is relevant to look at the characteristics of the projects. We asked the respondent how important a number of specific environmental aspects were in the project. We asked questions (1-5 score from very unimportant-very important) about (for each category the % respondents that answered that this specific aspect was (very) important is mentioned) :

- green development (creating new areas, 75% );
- road development (building new roads, reconstructing roads or expanding existing roads for instance from 4 till 6 lanes, 61%);
- shopping development (building new shopping eras, restructuring existing areas, 31%);
- development of dwellings (building new dwellings, restructuring existing ones, 62%);

- water management and development (improving existing water management, creating new retention areas, etcetera, 70%).

In general the projects we studied addressed various different environmental aspects. The mean number of aspects was 3.11 out of the five aspects we asked. So they were fairly complex projects (see further on). The median pass through time (the expected time it would take to implement the project) was 10 years. There was considerable variation in this since 21% of the projects was estimated to take less than four years whereas 31% was estimated to take more than 12 years. We also did ask the total and the public investments, but many respondents (178 out of 323) were not able to answer this and we therefore have to be very careful with these findings. Nevertheless, the projects are in this regard very heterogeneous. The smallest is 130.000 Euros, 50% of the projects is less than 100 million Euros, whereas 16% of the project has a total budget of more than one billion.

We turn our attention in the following section to the most important variables included in our analysis, namely the degree of PPP employed, content and process outcomes, project complexity, number of network strategies and organisational form. Control variables included are the phase of the project, the respondents' parent organisation, and their position in the project.

#### *Conceptualizing the degree of PPP*

An important variable in our research is the degree of PPP employed in the projects. This degree of PPP can be defined as the degree to which activities of the private and public partners are attuned to each other. We measured this by translating the three main characteristics of PPPs discussed above into three questions for our respondents. The respondents were asked whether:

- organisational provisions were made with which to structure the cooperation between public and private parties;
- financial risks were shared between public and private parties;
- the coordination of activities between public and private parties was addressed

Each item could be answered on a five point Likert scale. Using Cronbach alpha we can find out to what extent a set of items measures a single, unidimensional latent construct (Cronbach, 1951), in this case the degree of PPP. We performed reliability analysis (SPSS) to find out whether the three items specified above give a consistent measurement of the underlying theoretical construct 'degree of PPP'. The items were found to have a high Cronbach's alpha of 0.84. This implies a high internal consistency and means that by adding the items a scale can be constructed measuring this degree

. We recoded the variables so that a higher score on the scale implies a higher degree of PPP. We then divided this score by three. The final score varied between 1 and 5, with an average of 3.58. Of the resulting scores, 12% were at 2 or below and 28% of the scores were above 4. Therefore, it can be concluded that the degree of PPP of the projects was relatively high.

#### *Conceptualizing and measuring outcomes: process and content outcomes*

Measuring outcomes for these fairly complex projects is not an easy feat. One of the reasons for this is that actors have different goals and it is difficult to pick a goal by which to measure outcomes for the whole project. Measuring outcomes is also

problematic because these projects take a long time, and the goals of actors tend to change over time. Goal displacement is the commonly adopted term for this which carries a negative connotation. The same phenomenon can be looked at in more positive terms, and *learning* is the term adopted to refer to the more positive aspects of goal displacement (see Koppenjan and Klijn, 2004).

Another problem we faced in our analysis is that it is not always possible to assess outcomes through 'objective' measures such as the number of dwellings realized and the time it takes to complete a project. We choose therefore to use perceived outcomes as a proxy for these. Earlier research (see Klijn et al, 2008) and the literature on governance (see also Koppenjan and Klijn, 2004) has stressed that one can make a distinction between content outcomes (e.g. how innovative or cost effective the outcomes are) and process outcomes (e.g. how much managerial effort it required, and how much support the stakeholders consequently provided). Table 1 lists indicators of the two outcome dimensions and the twelve items that were used to measure them.

**Table 1. Measurements of outcomes**

<b>Content outcomes</b>	<b>Items</b>
1. innovative character	Do you think that innovative ideas were developed during the project?
2. integral nature of solution	Do you think that different spatial functions have been connected sufficiently?
3. involvement of actors (content)	Do you think that, in general, the actors involved have made a recognizable contribution to the results?
4. effectiveness solutions	Do you think that the solutions that have been developed really deal with the problems at hand?
5. effectiveness in the future	Do you think that the solutions developed are likely to be durable?
6. Relation costs and benefits	Do you think that, in general, the benefits exceed the costs of the co-operation process?
<b>Process outcomes</b>	<b>Items</b>
1. level of management	Do you think that the actors involved have contributed substantively to the management of the project?
2. conflict resolution	Do you think that conflicts and differences of opinion have been solved adequately during the project?
3. deadlocks	Did you witness any disturbing deadlocks during the project?
4. productive use of differences	Do you think that the actors have made use of the different perspectives and insights that exist in an adequate way in their efforts to frame the problem and find solution?
5. contact frequency	Do you think that the actors were in frequent contact with each other during the project?
6. support	Do you think that the outcome of the project will be supported by the individuals involved in its establishment?

A factor analysis performed on the twelve items (not included here) confirmed our initial opinion that there exists a clear process and a content dimension to the outcomes of PPPs. The Cronbach alpha of the six items measuring process outcomes is 0.80. Therefore, they can be assumed to form a single scale measuring the perception of process outcomes. The scores on these six items were added up, and divided by six. A higher score on the scale indicates a more positive perception of the process outcomes. The resulting scale has a mean score of 3.39 and a standard deviation of 0.60. Measured in a similar way, the Cronbach's alpha of the six items measuring content outcomes was 0.84. The resulting scale has a mean score of 3.90 and a standard deviation of 0.62. In both cases, the scores are above the theoretical mean (3), which indicates that the respondents are generally positive about the outcomes. Comparing both means, it also appears they are somewhat more positive about the content outcomes than the process outcomes.

#### *Project complexity*

An environmental project increases in complexity as it addresses more functions and involves more activities. As indicated above when discussing characteristics of the projects five different activities were identified to be part of a typical environmental project. To this we added a sixth aspect where we also asked a question about (business development. From participant responses, we determined whether one or more of these activities were performed in each project. The results of this yielded a project complexity scale with complexity ratings ranging from 0 to 6. On average, the projects involved 3.11 activities. However, there was wide variation in the numbers as seen by the relatively high standard deviation score of 1.50.

#### *Number of network management strategies*

This is an important variable and was used primarily to test Hypotheses 5, 6 and 7. Taking our cue from the extensive literature on network management (for an overview, see Agranoff and McGuire 2001; Klijn, Edelenbos and Steijn, 2010), we used a measurement composed of sixteen items indicating several types of activities. For instance we measured connecting as network management strategy type by items as: 'there is satisfactory time devoted to the communication between different parties', 'the project leaders consults those implementing the project and include them in his or her decisions', and 'It can be said that decisions making occurs collectively' (see appendix for a full list of items). To measure the number of management strategies employed, we first dichotomized these items<sup>3</sup>, and then counted the number of strategies that were actually used in the project. The resulting variable ranged from 0 (3.6% of the respondents) to 16 (6.3%), with a mean of 9.11 strategies used (standard deviation 4.18). A significant number of respondents (99 of our 323) were not able to answer these questions about project outcomes (mostly because they didn't know). This meant that the analysis incorporating these variables includes far fewer respondents than the 323 we started with.

#### *Organisational form*

To measure organisational form, we used a simple set of items distinguishing four different forms: no organisational form, project group, project organisation and an autonomous legal entity. Although these four categories do not form a continuous

variable, one can say that the degree of formality increases as we move from the ‘no organisational’ form category to the project group and joint project office categories. The category autonomous legal entity is the ‘tightest’ organisational form. Table 2 describes the distribution of organisational forms across projects as indicated by the respondents.

**Table 2. Respondent description of organisational forms employed (% , N=316)**

No formal organisational form	11
Project group with regular meetings between parties	61
Joint project office	17
Autonomous legal entity	9
Other forms	3

From Table 2, we can conclude that the category of project group is by far the most popular organisational form for Dutch PPPs, followed by the joint project office and the autonomous legal entity forms of organisation. In 11% of the projects, there is no formal organisational form, and in 3% of the cases, the respondents indicated that the chosen form is different from any of the provided categories . The most frequently cited form was the project group, indicating that organisational forms are relatively loose. Organisational forms are related to the ‘size’ of projects, as can be seen by the fact organisational form is statistically significant related to the median pass time (Somers d = 0.19). A project group is more often used for projects with a smaller median pass time, a joint project office and an autonomous legal entity are more often used for projects with a longer pass time.

In the following regression analysis ,we will treat the ‘other’ category of the organizational form variabele as missing, and three dummy variables will measure the effect of organisational form on outcomes.

#### **4. The impact of Public Private Partnership**

According to our first hypothesis, the degree of PPP should be related to both types of outcomes. In the first step of the analysis, we look at whether such a relationship does indeed exist. Table 3 provides the results of the regression conducted to answer this question. We controlled for project phase, the parental organisation of the respondents and whether or not the respondent had a managerial position.

**Table 3. Effect of degree of PPP on outcomes**

Model	Process Outcomes (N=217)	Content outcomes (N=220)
	Beta	Beta
Parental organisation respondent		
Local	.04	.13
Private	-.01	.12
other	-.12	-.05
Phase of the project		
Development	.01	.01
Executive	.03	-.06
Maintenance	.10	-.01
Managerial position	.06	.14*
Degree of PPP	.24**	.31**
R <sup>2</sup> <sub>adj</sub>	.09	.12

\*\* p < 0.01; \*p < 0.05

Table 3 confirms Hypothesis 1. A higher degree of PPP is clearly (and statistically significantly) related to both process as well as content outcomes. None of the control variables is significantly related to process outcomes, and managers tend to see better content outcomes compared to others. This, however, is only the first step in our analysis. In the following sections, the degree of PPP is correlated with complexity, organisational form and network management strategies.

*PPP: complexity, organisational form and managerial strategies*

Table 4 provides additional information on the relationship between complexity, organisational form and managerial strategies. It includes the correlation coefficients indicating the degree of association between PPP, complexity, managerial strategies, and organizational form. Organisational form is an ordinal variable and so the table lists the eta coefficient of this with the three other variables.

**Table 4: Correlations between degree of PPP, complexity, organisational form and managerial strategies**

	PPP	Complexity	Strategies	organisational form
PPP	*			
Complexity	.19**	*		
Strategies	.37**	.03 (ns)	*	
organisational form	.25**	.34**	.10 (ns)	*

\*\* p < 0.01

We first look at the correlation between complexity and degree of PPP. This correlation (0.19) is clearly statistically significant. When projects become more complex, the degree of PPP increases, and this confirms our second hypothesis that the degree of PPP is higher in more complex projects. At the same time, there is also a statistically significant correlation between the degree of PPP, organisational form and managerial strategies. The higher the degree of PPP, the more managerial strategies are used. Hypothesis 5 can thus be accepted. There is also a statistically significant relationship between the degree of PPP and organisational form ( $\eta = 0.25$ ).

Looking more closely at this relationship, it appears that Hypothesis 3 is confirmed. The degree of PPS is lowest (mean score 3.09) when there is no separate organisational form, and highest (4.25) when there is an autonomous judicial entity. In both cases, the degree of PPP lies between these two extremes (3.53 when there is a project group and 3.63 when there is a joint project office).

The degree of complexity is also significantly related to organisational form. A tighter form of organisation is chosen when the project is more complex. The joint project office and the autonomous judicial entity forms are more often selected in these situations. However, the degree of complexity is not related to the number of employed managerial strategies. Similarly, there is no correlation between organisational form and strategy (see Table 4).

Thus we can conclude that the degree of PPP is positively correlated with outcomes and that both dimensions of PPP, i.e., the form and the number of strategies, are positively correlated with the degree of PPP. However, organisational forms and strategy are not related to each other. The question to tackle now is what has the most impact on outcomes: form or strategies?

### **5. Which is more important: organisational form or managerial strategies?**

Now that we know how the degree of PPP relates to the organisational form and to the number of network management strategies, we can take a closer look at Hypotheses 4-7. We use a regression analysis (see Table 5), in which either process or content outcomes are the dependent variables and look at the various independent variables as discussed in the measurement section. Unfortunately, there is a relatively large number of missing

cases as a number of respondents were unable to answer questions related to the project outcomes.



**Table 5. Regression analysis with process and content outcomes as dependent variables**

Model	Process Outcomes (N=198)	Content outcomes (N=199)
	Beta	Beta
Parent organisation respondent		
Local	-,03	-,01
Private	-,02	,01
other	-,11	-,11
Complexity	-,13	,03
Phase of the project		
Development	,07	,06
Executive	,07	-,03
Management	,10	,07
Managerial position	-,02	,05
Degree of PPP	,12	,14*
organisational Form		
projectgroup	,04	,13
projectbureau	,01	-,06
Juridical entity	,03	,06
Number of strategies	,53**	,49**
$R^2_{adj}$	0,33	0,33

\*\* p < 0.05

Overall, we are able to explain a relatively large amount of the variance in project outcomes (33%) and the results are largely similar across both outcome types. The effect of the degree of PPP on outcomes is much lower than that earlier (compare Table 5 with Table 3). In the case of process outcomes, the degree of PPP ceases to be statistically significant. Only the number of management strategies appears to strongly and

significantly affect the perceived outcomes and organisational form was not found to be significantly related to these. This can not be explained by the (relatively low) correlation between organisational form and managerial strategies. A similar analysis that was carried out without the managerial strategies (not included here) also shows no significant effects on outcomes of the dummy variables representing the organisational form. Therefore, Hypotheses 6 and 7 are confirmed by our analysis. Managerial strategies do affect the outcomes, and are (much more) important with respect to these outcomes than the organisational form. Further, Hypothesis 4 (about the effect of organisational form on outcomes) is rejected.

## 6. Conclusion and discussion

In this article, we tested the widely held assumption that projects that are characterized by a high degree of public private partnership generate better results. Most PPP projects in The Netherlands relate to infrastructure and urban development. We therefore base our analysis on a large survey of individuals involved in a large-scale environmental development project. In general, the findings from our analysis match our conceptual model. When projects are more complex, the degree of PPP is higher. A higher degree of PPP is related to a tighter organizational form, and to the use of more network management strategies. However, only the latter is related to the outcomes of the project.

If we look deeper, it is striking that in general, Dutch public private partnerships in the infrastructure and housing area are characterized by a relatively low levels of formal project organization. Autonomous judicial entities make up only a small minority of the cases. In fact, there are more partnerships *without* any formal organization structures. This does not mean that there are no coordination activities or joint formulation of goals. It does also not mean that we do not see differences in the organizational form and the way partners are tied to each other by organizational rules, but it does mean that the organizational structure of Dutch partnerships is less formally organized. This probably contrasts with for instance UK partnerships, especially the PFI partnerships, which are more often cast in legally binding contracts.

As hypothesized, we found that the degree of PPP is positively related to perceived outcomes. So the higher the degree of PPP, the higher the perceived outcomes.

In examining outcomes, it is clear that it is the number of employed network management strategies that has the most impact on the outcome of a PPP. The organizational form of the partnership has relatively little impact. In fact, the positive correlation that exists between the degree of PPP and outcomes disappears almost completely when managerial strategies are factored into the analysis. This can be explained by the fact that improvisation and other more formal managerial activities are crucial to the success of a partnership

However, it is not our view that organizational form is completely irrelevant to the functioning of a PPP - only that this has little impact on its outcome. The outcomes are more greatly impacted by the active and intensive network management efforts in which the partners are connected to each other, new content is explored and the environment of the project is actively managed.

We are not surprised by the lack of relation between organizational form and managerial strategies. These partnerships operate in a complex environment and are characterized by dynamic decision-making processes. Any manager and initiator of such a PPP project has

to perform managerial activities no matter what organizational form the partners have chosen for their cooperation. From our perspective, this is the reason why organizational form does not contribute to the outcomes.

The findings of this study provide practitioners who tend to spend great lengths of time on the form of their partnerships with something weighty to think about. It similarly provides important insights that would contribute both to governmental and academic discussions on partnerships. Great emphasis has been traditionally placed in these discussions on the organizational forms of partnerships. Still, as different it is from the writings in the literature and in the professional discourse, this finding is not entirely novel. If you ask a good manager involved in a PFI contract in the UK what determines a project's quality, he will tell you that it is the management of the contract, keeping good relations and generally doing a good job. If you absolutely need the contract, you are already in trouble. So in that sense we suspect that our findings, although they are found in a context of Dutch PPP's which have a slightly less contractual character, are also relevant for most 'families' of PPP.

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## Appendix

### *Population and survey*

The table below describes the population we have used for our survey, and the number of respondents that have returned usable questionnaires.

**Table 1. Population and Survey**

Number of people on the Habiforum List (after deleting academic researchers)	1592
Returned questionnaires	547
Analyzed questionnaires	323

We were interested only in practitioners who had been directly involved in the project. The original list obtained from Habiforum contained 1592 names that were usable after removing academic researchers. An e-mail was sent in November 2006 to these addresses, with a (secured) link to a webpage containing the questionnaire. We knew beforehand that this list included many people with only a broad interest in spatial projects and without ‘real’ involvement in such a project. Therefore, one of the first questions of the questionnaire was what specific project the respondents were involved in. This was done in hopes of selecting only those responses that had been filled out by people involved in the projects. In total, we received 547 responses, but many of these were incomplete. In fact, 188 people did not provide any information about an environmental project they were involved in. They simply quit the survey after reading questions about these projects. We therefore deleted these respondents from the database. We also had to delete 36 other respondents from the dataset, because they did not respond to questions regarding key variables. This process left with 323 respondents who answered most (but not all) questions in the questionnaire and indicated that they themselves were involved in environmental projects. The final response rate was estimated at 21%. The limited response rate suggests that a degree of caution is necessary in interpreting our data as: a) the actual population of people involved in environmental projects is unknown and b) it is impossible to find out whether our participants are representative of this population. Nonetheless, because of the importance of the Habiforum network in the Netherlands, we have sufficient reason to believe this sample provides a reasonable overview of all environmental projects in the Netherlands (see note 3)

### *Project and respondent characteristics*

#### *Items to measure network management strategies*

We used 16 items to measure network management strategies in this paper. The table below presents the items that were used.

### **Table items for management strategies**

1. relevant public groups are involved via the organized forms of negotiation and discussion platforms
2. relevant private groups are involved via the organized forms of negotiation and discussion platforms
3. relevant civil action groups are involved via the organized forms of negotiation and discussion platforms
4. In every new phase of the project, new parties are sought out and new connections developed in this way.
5. In this project, as great an effort as possible has been made to make different opinions visible and to include them within the decision making process
6. In this project, satisfactory attention has been paid to the exchange of views between individuals with differing standpoints
7. During the process of collecting information, sufficient emphasis has been placed upon the development and establishment of common points of departure and information needs
8. Satisfactory levels of attention were paid in this project to involving external parties/people that can bring new ideas and solutions to the debate
9. There is satisfactory time devoted to the communication between the different parties
10. The project leaders consults those implementing the project and includes them in his or her decisions. It can be said that decision making occurs collectively
11. The project leaders in this project considers the relationships between parties and persons, their basis, and how they have developed and are developing
12. The project management seeks to bring opposing interests closer together in the event of deadlocks and serious disagreements.
13. Explicit agreements are made in relation to the organisational form of cooperation (project groups, steering groups etc.) to be carried out within the project.
14. Sufficient attention is paid in the early stages to establishing rules for managing conflict.
15. Allowances have consciously been built into project-related agreements for deviations from the plan if such a deviance is found to be advantageous.
16. The withdrawal of parties from the project is possible, if this is necessary to protect their interests .

### *Project and respondent characteristics as control variables*

Besides variables that measure the main concepts, we included in our analysis several control variables related to both respondent and project characteristics .

### Phase of the project

The phase of the project is known to influence the relation between PPP and outcomes. For instance, almost by definition, there will be fewer outcomes in the first phases of a spatial project. From the responses to our survey, we can identify four distinct phases: 1) preparation phase (21%); 2) developmental phase (41%); 3) building phase (17%); 4) maintenance phase (21%).<sup>4</sup> We include three dummy variables in our analysis, with the preparation phase serving as the reference category.

### Parent organisation of the respondent

The respondents hail from distinctly different backgrounds and this may have a clear bearing on their perception of outcomes. Therefore, we control for this in the analysis. Four different backgrounds can be discerned: 1) national civil servants (11%); 2) local civil servants (including counties and water board) (29%); 3) private sector respondents (48%); 'others' (13%). The last group comprises mainly respondents from stakeholder organisations like environmental groups. Three dummy variables were created to include the backgrounds in the analysis. National civil servants serve as the reference category.

### Position in project

The perception of outcomes can also depend on the position of the respondent within the project. Given our interest in the effect of managerial strategies, we included a dummy variable in the analysis that distinguishes those in managerial positions (28.8%) from those without such a position.

## **Endnotes**

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<sup>1</sup> And some of these known (PFI like) projects (there are only a few of them in The Netherlands so far) are also in our sample. Since we asked our respondents to answer the questions for a specific project they are most involved in which they had to fill in the questionnaire we have an overview of all the projects of the survey.

<sup>2</sup> On the other hand, there are also arguments against too tight and well organized partnerships. The most important argument comes from the neo-institutional economics framework that puts forth the view that the act of organizing, whether by extensive contracts or organisational structures is costly in that it implies significant transaction costs (Williamson, 1996). It can also diminish the freedom of the partners to act (Hazeu, 2003).

<sup>3</sup> This is supported by the fact that the reliability analysis conducted on the sixteen 5-point Likert items showed very high levels (Cronbach's alpha = 0.90). This suggest strongly that the sixteen items make up a single scale. However, a dichotomization of the scores is called for in order to measure the number of employed strategies. Scores 1 and 2 indicated that the strategy was used, and these were both re-assigned a score of 1. The other three categories were assigned scores of 0.

<sup>4</sup> Note that we did not ask respondents in which phase they were, because that might generate confusing. We listed a number of activities (from initiating ideas, till implementation of actual maintenance activities) and deduced the phase from the level of activities based on the answers.