

The impact of changing rules-in-use on seizing a joint investment opportunity: a Combiplan Nijverdal case study.

Bachelor Thesis

BSC Spatial Planning and Design

Faculty of Spatial Sciences

University of Groningen

Author: Jur Heerink

Student number: S3548546

Supervisor: Dr Tim Busscher

Date: 11-6-2021

Abstract

The influence of rules-in-use can be indicated by determining the rule state of a certain rule category.

These rule states can indicate a positive or a negative influence on seizing a joint investment opportunity (JIO). A case study of two time periods withing the Combiplan Nijverdal project have been conducted in order to assess the impact of rules-in-use on the seizing of a JIO. Rule state changes of three rule categories were found to have had a positive influence on the seizing of Combiplan Nijverdal. One rule state was found to have shifted towards a less negative influence. Individually these rules-in-use are not able to impact the seizing, only combined is there an impact on seizing the JIO. Rules-in-use of three rule categories were found to not have had an impact in the seizing of the JIO in Nijverdal.

Table of contents

Abstract	2
1. Introduction	4
2. Research aim	5
3. Theoretical Framework	6
4. Methodology	10
5. Results	13
6. Conclusion & discussion	20
References	21
Appendix A	23

1. Introduction

Infrastructure generally costs millions or even billions of euros to build and has a long life-span (Baren, 2009). But when this lifespan comes to an end, infrastructure needs to be renewed. Simply renewing the old infrastructure is possible but ignores the fact that the world around that particular infrastructure has changed. During the lifespan of infrastructure, new technologies develop and at the same time it is very likely that societal and political values and desires have changed. Such is the case in Nijverdal, where the N35 passed through the town centre and a desire to relocate the road emerged. These developments bring forth different opportunities and desires for different actors. When multiple actors share a goal or desire that cannot be obtained individually, they can combine investments to reach that shared goal or desire. Such a shared goal or desire is called a joint investment opportunity (JIO). An example of a seized JIO is the Calandbrug (Ministerie van Infrastructuur en Milieu, 2015) in the Port of Rotterdam between the Port of Rotterdam and Prorail. Unfortunately, such opportunities are not always seized. Studying cases where JIOs have been seized or have not been seized can help to seize more JIOs by creating a better understanding of the rules that are in place. In the case of the Combiplan Nijverdal, the JIO was only being seized after multiple decades. JIOs can be analysed using the Institutional Analysis and Development (IAD) framework designed by (Ostrom, 2015; Ostrom et al., 1994). The way this framework works is that rules-in-use affect the variables within the framework and have an impact on the outcome (Ostrom, 2009). Researching and creating a better understanding of those rules can help seize more JIOs in the future.

2. Research aim

This research aims to explore and create a better understanding of the impact of rules-in-use on the seizing of a joint investment opportunity using the Institutional Analysis and Development (IAD) framework designed by Elinor Ostrom. Rules-in-use are the rules in the IAD framework that have operational relevance when enforced and that help structure the action arena of the IAD framework. This research goal is to be achieved by doing an in-depth case study of the Combiplan Nijverdal in which the IAD framework is used to analyse the Combiplan Nijverdal in the periods 1981-1989 and 2008-2015. Combiplan Nijverdal is a project in which the N35 and the train station were moved below surface in the town of Nijverdal. Differences between the IAD frameworks are then investigated further to determine the influence of changes in rules-in-use on the seizing of the joint investment opportunity.

The primary research question will therefore be:

- What is the impact of changes in rules-in-use on seizing the joint investment opportunity of Combiplan Nijverdal?

Secondary research questions will be:

- How do rules in the IAD framework influence joint investment opportunities?

- What rule states and rules-in-use have changed between analyses in the case of Combiplan Nijverdal?

- How have the changes in rule states and rules-in-use impacted the action situation and outcomes of the IAD framework?

The theories and concepts that are relevant to this study are discussed in chapter 2. The methodology used in this study is discussed in chapter 3. Chapter 4 shows the results of the case study. Chapter 5 forms the conclusion, followed by the discussion in chapter 6.

3. Theoretical framework

This chapter forms a theoretical basis for the analysis of the JIO of the Combiplan Nijverdal. It is achieved by discussing the IAD framework and diving deeper into the action arena within the IAD framework in order to explore the concepts of rules-in-use and rule states.

IAD framework

JIOs can be analysed using the Institutional Analysis and Development (IAD) framework. The IAD framework was designed to increase understanding of complex collective action situations. It does this by dividing the complex situations into action arena's (Mcginnis, 2011). The input of the framework consists of exogenous variables, of which rules is one. Ostrom (2009) uses the following definition of rules to be used within the IAD framework: 'Shared understandings by participants about enforced prescriptions concerning what actions (or outcomes) are required, prohibited, or permitted.' Rules are contextual, a rule that works in one situation may not apply to another. For this reason it is necessary to understand what rules are being used in a certain action arena. Rules that are used within an action arena are the working rules, they are the rules that participants base their actions on (Ostrom, 2009; Ostrom et al., 1994). Within the IAD framework, rules can be categorized into a number of categories, being: -Boundary rules; -position rules; -choice rules; -information rules; -aggregation rules; -payoff rules; and -scope rules (Ostrom, 2009; Ostrom et al., 1994; Ostrom and Basurto, 2011).

Action arena

The action arena is where the exogenous factors are linked to the participant component and the action situation component to create potential outcomes (Ostrom, 2009; Ostrom et al., 1994). The action situation component can be dissected further into a set of seven clusters of variables. The set of variables dictate who the actors are and how they operate. These variables are: -participants; -positions; -actions; -potential outcomes; -control; -information; and -costs and benefits (Ostrom, 2009; Ostrom et al., 1994). The exogenous rule categories discussed earlier can be ascribed to the variables in the action component, as can be seen in figure 1, creating a clear integration between the working rules and the action arena of the framework. Defining the rule categories is necessary to ensure a correct integration. This is needed, as the categories and thus the allocation of different working rules in the IAD framework are not fixed and can be altered to different research purposes. The definitions for the different rule categories used in this study are shown in table 1.

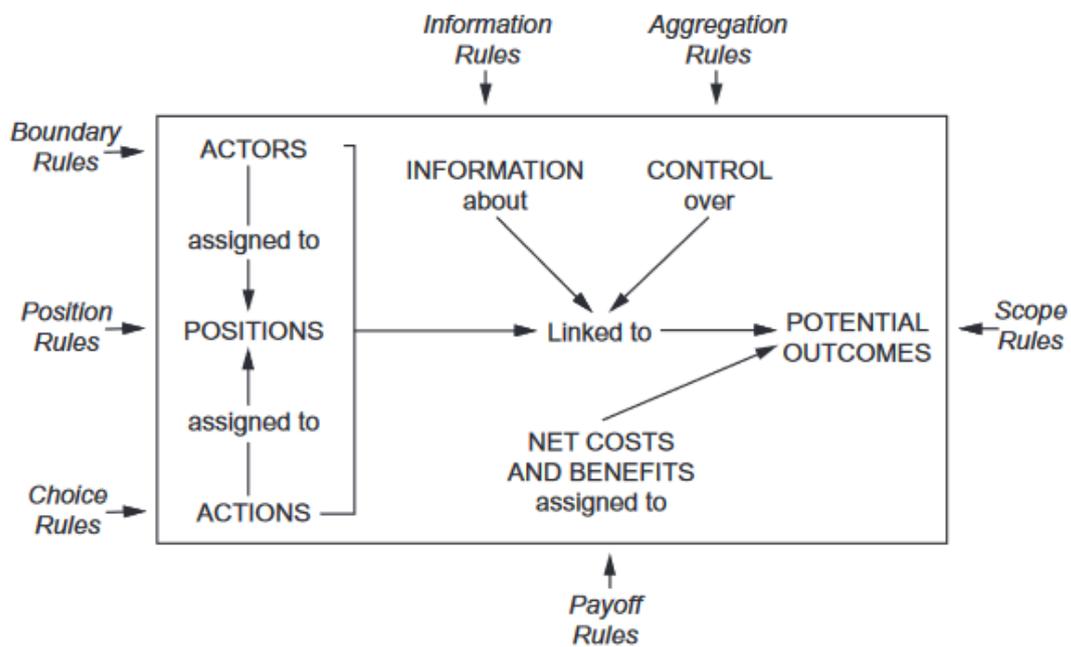


Figure 1: overview of the action arena (Ostrom, 2011).

Rule categories	Rule definition	Possible rule states
Position	Positions, i.e., combination of resources, opportunities, preference and responsibilities, that can be held by actors	Convergent or Divergent
Boundary	Boundaries to enter or leave positions and how	Open or Closed
Choice	What actors in certain positions may, must, or must not do	Flexible or Rigid
Information	What information is to be sent and received by which actors, at what moment, and using which channels	Restrictive or Facilitative
Aggregation	How actors jointly affect decisions regarding proposed actions and activities	Symmetric or Non-symmetric
Scope	Which outcomes may, must, or must not occur	Homophily or Heterophily
Pay-off	Costs and benefits to be paid or received by actors	Proximate or Distal

Table 1: Rule definitions and possible rule states, slightly adapted from Neef et al. (forthcoming)

Every time a collective action situation gets more complex, the number of working rules can increase exponentially (Ostrom and Basurto, 2011). An increase in working rules makes it more and more complex to determine the overall state and effect of a rule state on a JIO. It is therefore useful to

understand where the working rules come from and what the rules on a lower level are. Three levels of rules can be distinguished, operational rules; collective-choice rules and constitutional-choice rules (Ostrom, 2009), each on a lower level than the previous. The rules that help structure an action situation are the rules-in-use. Rules-in-use are rules that when enforced, possess operational relevance. When underlying rules do not possess operational relevance, they can be described as rules-in-form (Sproule-Jones, 1993). The rules-in-use allow rule categories in complex situations to be classified in states. These states are a mechanism that can either have a positive or negative effect on the seizing of a JIO (Neef et al., forthcoming), an overview of the possible states for every rule category is shown in table 1. These states are not the same as the conditions Ostrom (2011) uses, as they only describe the rules-in-use in the absence of rules (Neef et al., forthcoming).

Position rules determine the roles and positions that actors can have (Ostrom, 2009). Each of those roles and positions come with different expectations, responsibilities and resources. The possible states for the position rule category are convergent and divergent. In a convergent rule state, the roles and positions actors position themselves in is not diverse. Varughese and Ostrom (2001) explain that this diversity is important for collective action, as a diverse set of positions allows actors to collectively deal with various situations. Roles and positions in a divergent rule state are diverse and can be regarded as having a positive influence on the seizing of JIOs, whereas a convergent rule state can be regarded as having a negative influence on the seizing of JIOs.

Boundary rules determine who is able to enter or leave a role or positions. Possible rules state for the boundary rule category are open and closed. An open rule state means that actors are free to enter or leave the negotiation table and take up a or leave a role, without any repercussions or conditions. Open entry is beneficial to seizing a JIO as it allows more actors to join, which increases diversity in roles and positions. Open and closed exit can both be beneficial or detrimental towards seizing a JIO (Neef et al., forthcoming). An open exit means that actors can show opportunistic behaviour, but can also lower the complexity of a JIO, as the number of actors decreases. A closed exit means that opportunistic behaviour is limited, but that the complexity is higher compared to a situation with an open exit (Neef et al., forthcoming).

Choice rules determine what actors may, must or may not do in certain scenarios. The choice rule category has either a flexible or a rigid rule state. In a rigid rule state, actors have to follow set procedures and are not free to deviate from them. When there are conflicting goals between actors, a rigid rule state can negatively impact a JIO. When actors are able to deviate from their structures and procedures, the rule state is flexible. When actors are flexible rather than rigid, they are better able to customize procedures to fit a specific scenario (Feiock, 2013; Neef et al., forthcoming) and come to an agreement. A flexible rule state can therefore be regarded as having a positive impact on seizing a JIO.

Information rules determine what information actors share with other actors, when they share that information and how it is shared. The rule category can either be in a restrictive or in a facilitative state. In a restrictive state actors, there is information in possession of single actors. This type of information is unshared information (Schittekatte and van Hiel, 1996). Unshared information has a negative impact on seizing a JIO, as actors have to make decisions lacking the unshared information. A facilitative rule state positively effects the seizing of a JIO as information is being shared and actors are able to make informed decisions (Neef et al., forthcoming; Schittekatte and van Hiel, 1996).

Aggregation rules determine the influence of single actors on the decision making process in which multiple actors have partial control (Neef et al., forthcoming). When the input from all actors is weighed equally, the rule category is in a symmetric rule state. Equal influence for all actors has a

positive effect in seizing a JIO, as decisions can be made that collectively have a better outcome, but that individually have a negative impact on certain actors. To achieve this, certain actors have to give up some of their influence (Herzberg and Ostrom, 2000). In a non-symmetric rule state, input from actors is not weighed equally. Actors with more influence than other actors are able to follow their own agenda and push for agreements that are individually more attractive rather than agreements that are collectively more attractive. For this reason, a non-symmetric rule state can be regarded as having a negative influence on seizing a JIO.

Scope rules determine for every actor which outcomes may, must or may not occur. Possible rule states for the scope rule category are homophily and heterophily. These rules states differ from the rules states that Neef et al. (forthcoming) use. These alterations are made as the rules states of concurrent and dissociated that Neef et al. (forthcoming) use extend beyond the collective action arena. In a homophily rule state the interests and intended outcomes from different actors can align. Aligned interests and intended outcomes between actors has a positive effect on seizing a JIO (Gerber et al., 2013). In a heterophily rule state interests and intended outcomes between actors vary, causing actors to not agree on a collective scope (Gerber et al., 2013). For this reason, heterophily can be regarded as having a negative impact on seizing a JIO.

Pay-off rules determine what the costs and benefits are for the actors involved. These costs and benefits can be either proximate or distal. When the outcome of the JIO is in line with the interests and desired outcomes of an actor, also termed proximate, the willingness and ability to make costs are increased for that actor. This increased willingness or ability to make costs positively impacts the seizing of a JIO, as more resources are available to seize it (Neef et al., forthcoming). Creating a proper distribution of the risks further improves the ability to make costs, this is done by placing the highest risks on the actors that are best able to cope with that risk. Rewards also increase the willingness and ability to make costs, as they are positive incentives and increase cooperation between actors (Neef et al., forthcoming). In a distal rule state costs are not aligned with the interests and desired outcomes of actors, decreasing the willingness and ability of those actors to contribute in seizing a JIO. A distal rule state therefore has a negative effect on seizing a JIO.

The potential outcomes of the action arena indicate what interactions take place between participants. Interactions follow the direction of the different rule states and the rules-in-use. These interactions can have a positive or negative influence on the seizing a the JIO. These actions in their turn determine the outcome of the IAD framework. In the IAD framework, rules have an indirect link to outcomes of the framework. For this reason, researching rules can prove useful in seizing future JIOs.

4. Methodology

Research method

To give an answer to the research aim, a deeper understanding of the rules-in-use with their inner workings was necessary during two time periods of the Combiplan Nijverdal. The amount of sources with such knowledge is low and a quantitative research method was not able to provide such an in-depth understanding of the rules-in-use (Punch, 2014). For these reasons a qualitative case study research method was chosen to determine the impact of changing rules-in-use on the seizing of the JIO of Combiplan Nijverdal. To achieve the research aim, the action arena of the IAD framework was analysed over two different time periods using an embedded case study. An embedded case study allows for research on sub-units within the case study (Yin, 2003), with the time periods being the sub-units. The first time period being from 1981 up until 1989 and the second one being the period 2008 to 2015. The 1981 to 1989 period was chosen as it was a period where it was clear that collective action needed to happen, but no action was taken. The period 2008 to 2015 was chosen as it is the time period in which the JIO was being seized. The action arenas were then compared in order to identify changes in rule states that have occurred over time. These changes are indicators of changes in rules-in-use which can help explain the seizing of the JIO.

Case selection

The case selection was done by selecting different infrastructural projects with multiple actors throughout the Netherlands that have taken multiple decades and have been completed. Only cases within the Netherlands have been taken into consideration, as collecting data from Dutch sources yielded more information and was easier to comprehend than data written in other languages. The cases were then reviewed further to select the cases in which a JIO was present. A further review of these cases was done to determine if the cases went from being a JIO that was not being seized towards being a seized JIO at completion. From this case selection method, Combiplan Nijverdal was chosen as subject of study.

Data collection

Data collection was done in three different ways:- by doing a literature review, by doing one-on-one semi-structured interviews and by doing a document analysis. Using this triangulation of research methods increases the validity and depth of the research (Clifford et al., 2016; Rashid et al., 2019).

A literature review was done to explain and elaborate various concepts that were relevant to JIOs and rules-in-use. The review helped in getting an insight into what JIOs are and how rules-in-use impact the IAD framework. Literature was gathered from sources such as Google Scholar and SmartCat, and helped in answering sub-questions one and three.

A semi-structured interview was conducted to collect information about the rules-in-use that were present in the cases and the extent of their impact on the JIO. A semi-structured approach to the interview enabled the interviewee to share more detailed in-depth information which helped in answering sub-questions two and three. The use of a semi-structured interview with open-ended questions also limits the interviewer from steering the interview towards specific insights and answers which were in line with the literature review. The interviewee needed to have expertise regarding the project in order to be useful to the study. Therefore, participants were selected based

on their expertise and relevance to the research. Experts from Prorail, Rijkswaterstaat, the municipality of Hellendoorn and the province of Overijssel were invited for interviews. As a result hereof, one interview was conducted with the project manager from the municipality of Hellendoorn.

For the document analysis, internal documents, reports and media documents were used to generate a deeper understanding of the case, as well as to uncover working rules and rules-in-use that have impacted the JIO.

Data analysis

With consent from the interviewee, an audio recording of the interview was made in order to be transcribed. These transcriptions were then analysed using a deductive coding strategy in order to find working rules, rules-in-use and the rule states in order to assess their impact on the seizing of the JIO. Useful data and information that falls outside of the deductive coding strategy will be analysed using an inductive coding strategy. Data from the document analysis will be coded using the same method as the interview data, and can be seen below in table 2.

Themes	Codes	Subcodes
Rules in action arena	Position rules	Convergent Divergent
	Boundary rules	Open Closed
	Information rules	Restrictive Facilitative
	Choice rules	Rigid Flexible
	Aggregation rules	Symmetric Non-symmetric
	Scope rules	Homophily Heterophily
	Pay-off rules	Proximate Distal
Other data and information with influence on joint investment opportunities		

Table 2: coding scheme used for the interview and the

Ethical considerations

For interviewing, there are some ethical considerations. First of all interviewees can be biased. Especially interviewees, as they represent one of the actors involved in the project. Secondly, interviewees need to give their consent in order to interview them and to use the information that they provide. Interviewees have the right of privacy, for that reason, personal information is made anonymous as much as possible. Identifying data is stored on a different device separated from the interview data in order to protect the interviewees privacy. Thirdly, the interviewer needs to be careful not to steer the interview in such a way that only certain types of answers are obtained. To prevent this, a semi-structured interview style is used.

For the document analysis it is necessary to review the sources themselves, as the sources may be biased, hold their own agenda or be homogenous in nature to one another. It is therefore necessary to understand where the data comes from and what this data is meant to represent. Also attention should be given to the amounts of data sources provide, as an overflow of data from one source can skew results. If this is the case, a closer look should be given to the real effect this data has had on the seizing of the JIO.

5. Results

In this chapter, first an overview of the case study is given, followed by the analyses of the time periods of 1981-1989 and 2008-2015. The analyses will include an overview of the rule categories and their corresponding rule states, and an explanation of these rule states. Lastly, the two analyses are compared to each other.

The Combiplan Explained

Nijverdal is a town with around 25,000 inhabitants in the province of Overijssel, and is a part of the municipality of Hellendoorn. In the 1970's, with increasing road traffic, the centre of Nijverdal started to become a bottleneck between Twente and Zwolle, causing a lot of congestions in the middle of the town. The increase in road traffic negatively impacted the quality of life on and around the road, decreased road safety and negatively impacted the connection between the regions of Enschede and Zwolle. For these reasons, the municipality and Rijkswaterstaat agreed that change was needed. It took 40 years to solve these issues, via a project that was given the name Combiplan Nijverdal. Among some changes to intersections, the project included a 1500 meter long track below surface with an almost 500 meter long tunnel that was constructed in Nijverdal, in which the N35 and the railroad station are located. An overview of the plan can be seen in figures 2 and 3.

In 1975 a local bar owner named Leo ten Brinke was the first one to suggest a tunnel should be built underneath the town for traffic to pass through (Tunnelplan, 2021), but it took 20 years until this plan was accepted and another 20 years before the plan was realized.

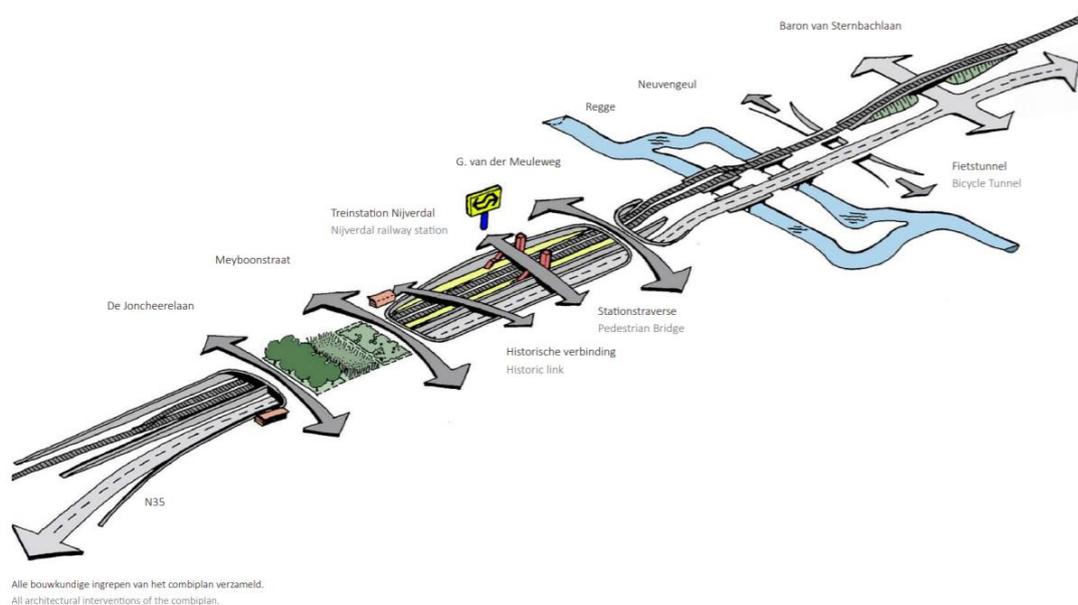


Figure 2: Project overview of Combiplan Nijverdal(van Heeswijk, 2021).



Figure 3: Aerial overview of the Salland-Twentetunnel (van Heeswijk, 2021).

Action arena analysis 1981-1989

The first analysis of the action arena is based on the state of the JIO in the period 1981-1989. During this time period, the JIO was not being seized and there was a state of inaction. It was clear during this time that collective action needed to be taken, but no concrete actions took place. The rule states are listed in table 3 .

Rule category	Rule state
Position	Divergent
Boundary	Closed
Choice	Rigid
Information	Restrictive
Aggregation	Non-symmetric
Scope	Heterophily
Pay-off	Proximate

Table 3: overview of rule categories and corresponding rule states for the period 1981-1989.

The position rules hold a divergent rule state, as different parties had various roles. Rijkswaterstaat had the role of doing research and advising the minister about the JIO, the minister responsible for Rijkswaterstaat had the role of decision maker. The stakeholders municipality of Hellendoorn, province of Overijssel and Regio Twente had advisory and lobbyist roles and were responsible for various permits (Tunnelplan, 2021). Furthermore the role of incentivizer shifted between various organizations. Rijkswaterstaat was the main incentivizer as they were the owner of the N35, but stakeholders from other parties tried to stimulate the urgency of the project when Rijkswaterstaat put the project on a lower priority as stated by the interviewee.

“Overijssel is in principle the one that sat around the table with the minister to convince them to handle the N35. Eventually when the minister agrees, Rijkswaterstaat will pick up the project.”

When combining the position rules, a comparison can be made between the actors of the Combiplan Nijverdal and between those in a majority cabinet. With Rijkswaterstaat having the majority and being responsible to make plans and decisions and the other parties being different members from the opposition tasked with trying to align the interests of Rijkswaterstaat with their own and to give feedback to plans and decisions.

The boundary rule state is closed, as only governmental organizations were invited and no other parties could join the negotiation table. What was interesting is that parties that were not allowed at the negotiation table tried to exert influence by forming action groups such as the ‘Rondweg-Rampweg’ and the ‘Tunnelcomité’ groups (Tunnelplan, 2021). The closed rule state in this case study can be regarded as having a positive influence on seizing the JIO, as it was a mitigating factor to the complexity by keeping the number of actors low. According to the interviewee this meant that the success of action groups was limited:

“They have not been at the table to really push their plans, it was taken into account during other considerations just like all others.”

The choice rule state is rigid, as actors were not willing to change their rules or procedures. This had as effect that choices were not made, and instead another study was started to meet procedures. The inability to deviate from procedures is shown through the reports and advices that Rijkswaterstaat has conducted: in 1983 a restructure of the Grotestraat was decided upon; in 1985 the ring road plan was put on hold; in 1988 the tunnelplan appeared as a possibility in an advice to the minister; and in 1989 a study was started to review the necessity of improving the connection between Zwolle and Enschede (Tunnelplan, 2021). This meant that during these procedures the JIO was not being seized.

The information rule state is restrictive. Information from Rijkswaterstaat was only shared between actors in the form of official documents. The municipality of Hellendoorn for instance was found to only be able to react to the documents and advices brought out by Rijkswaterstaat (Tunnelplan, 2021). Information sharing from other stakeholders was mostly one-sided and more facilitative going towards Rijkswaterstaat in order to align the decisions of the minister and Rijkswaterstaat as much as possible with individual interests.

Aggregation rule state is non-symmetric. Rijkswaterstaat exerted more influence than the other stakeholders. As the municipality of Hellendoorn, Provincie Overijssel and Regio Twente could exert influence on decision making, the final vote was in the hands of Rijkswaterstaat and the minister (Tunnelplan, 2021).

The scope rule state is heterophily. All of the participating stakeholders desired different outcomes of the project. An information sheet from 1986 sums up the different desired outcomes to the following: Rijkswaterstaat wants a fast connection between East and West; Provincie Overijssel wants to solve two current bottlenecks; and the municipality of Hellendoorn wants to create a calmer and safer inner city (Tunnelplan, 2021). What is apparent is that the differences in project scales are the reason for the heterophily rule state.

The Pay-off rule state is proximate. The stakeholders all had an interest to invest in the JIO. Actors such as Provincie Overijssel and the Municipality of Hellendoorn were even willing to invest more in order to align the project more with their own interests (Tunnelplan, 2021). The risk for these actors is losing parts of these investments if the choice is made to opt for a solution that does not align with

their own interests. Rijkswaterstaat did not have a definite amount to invest, this was determined by the plan that would be acted upon. For this reason, Rijkswaterstaat can also be regarded as willing to invest.

Action arena analysis 2008-2015

The second analysis of the action arena is based on the state of JIO during the period 2008 to 2015. In this period JIO was actively being seized and collective action did occur. The rule states are shown in table 4.

Rule category	Rule state
Position	Divergent
Boundary	Closed
Choice	Flexible
Information	Facilitative
Aggregation	Non-symmetric
Scope	Homophily
Pay-off	Proximate

Table 4: Overview of rule categories and corresponding rule states for the period 2008-2015.

The position rule state is divergent. During this period the different parties had different roles. Each stakeholder was working on the project with their own responsibilities. Rijkswaterstaat had the role of main project lead and was responsible for the bigger project outlines. The municipality of Hellendoorn was responsible for the permits that were necessary, but also worked on their own areas of interest. Prorail was responsible for their train tracks and the contractor was responsible for design and building. The contractor was given a fairly open role by Rijkswaterstaat, meaning they also had a say in the design of the JIO. According to the interviewee the contractor got this open role due to Rijkswaterstaat changing the type of contract agreement from being very detailed into a contract agreement that gave the contractor more influence on decision making .

Boundary rule state is closed. Although in between the time periods of the two analyses Prorail and the contractor were given entry to the negotiation table, new parties could not join. The current stakeholders have signed a contract with each other, which gives no room for other parties to join. Closed entry has had the effect of keeping the complexity of the project relatively low. Although actors could exit, no actor did as it meant missing out on potential benefits and having no influence on the future of the project. The interviewee stated the following about the open exit:

“I think that everyone had the same goal to develop that tunnel. Once you are in that process you do not step out easily. I think also because the regional goal was so massive and Rijkswaterstaat pulled the cart. So you have to go in that direction together, if you step out, you get nothing.”

The choice rule state is flexible. Within the JIO stakeholders are able to divert from their institutional choices. An example of this is Rijkswaterstaat switching from an R.A.W. (Rationalization and automation ground-, water- and road construction) towards a system which allows the contractor much more freedom. Rijkswaterstaat, Prorail, Provincie Overijssel, Regio Twente, the municipality of Hellendoorn and the contractor are able to collaborate instead of holding on to their individual rules and procedures. The interviewee states the following about the flexibility:

“Rijkswaterstaat thinks a lot in processes. These processes are very nice, but often simply do not work. You have to keep the processes simple and sometimes you really need to work together and understand each other.”

Information rule state is facilitative. Information gets shared between participants on a weekly or monthly basis during meetings where members from different stakeholders were present.

“We had set meetings with the constructor and with Rijkswaterstaat. They were communication and building meetings. We were on it full time, it was the only thing we were doing. We had a lot of meetings.”

The interviewee further states that there still was information that was unshared by all stakeholders, as they all had their own negotiation strategies. Overall the rule state can be seen as facilitative since most of the information gets shared between actors.

The aggregation rule state is non-symmetric. Rijkswaterstaat has given up some of its control over the decision making process to a point where input from various stakeholders is valued, but the interviewee mentions the following about the aggregation rules:

“It is the case of who pays, gets to make decisions. They do have more influence. But the province has naturally also paid a decent amount, and thus also had quite a bit of influence.”

With them, the interviewee references to Rijkswaterstaat, the party that has paid most of the costs. The rule-state is non-symmetric, as the more financially invested actors were able to make the decisions. The rule state is not strongly non-symmetric as other stakeholders certainly did have influence on decision making, but the different stakeholders can not be regarded as having equal amounts of influence. The interviewee mentions a painful example of this happening during the project, in which Rijkswaterstaat planned a sewer in the Bouwmeesterstraat. The municipality of Hellendoorn already knew beforehand that it would have to be taken out again, but did not have enough influence to stop the placement of the sewer.

The scope rule state is homophily. Stakeholders have agreed to an outcome of the JIO, this outcome being the construction of a tunnel with a two lane road and train station in Nijverdal (Tunnelplan, 2021). Through this agreement, the different stakeholders have assimilated their individual goals into a shared goal.

The pay-off rule is proximate. As the outcome of the collective action is in the interest of all stakeholders, they are more willing to invest to take advantage of the JIO. Because of this, and due to the agreements between all the stakeholders, the risk investing in the JIO is low. Rijkswaterstaat is the stakeholder with the highest investment, making it the stakeholder with the highest financial risk. Followed by the Province of Overijssel and then the municipality of Hellendoorn and Prorail (Tunnelplan, 2021). This distribution of risk has incentivized collection action as the risks are distributed towards the stakeholders who can manage those risks best. The interviewee also mentions the presence of guarantees from the province in case of a money shortage. This guarantee further lowers the risk of other stakeholders and increases their willingness to make costs.

Comparison between rule configurations

A comparison of the rule configurations of the 1981-1989 and the 2008-2015 time periods is made in order to find out which rule states and which rules-in-use have changed. A change in a rule state or rule-of-use indicates an impact of that rule state or rule-in-use on the seizing of the JIO. The rule states of both time periods are displayed in table 5.

Rule category	Rule state in period 1981-1989	Rule state in period 2008-2015
Position	Divergent	Divergent
Boundary	Closed	Closed
Choice	Rigid	Flexible
Information	Restrictive	Facilitative
Aggregation	Non-symmetric	Non-symmetric
Scope	Heterophily	Homophily
Pay-off	Proximate	Proximate

Table 5: Overview of rule categories and corresponding rule states for both time periods.

Both rule states for the position rule category are divergent in both time periods as the actors had different roles and positions. The positions of individual actors did not change much, Rijkswaterstaat was the main incentivizer during both periods, with the other actors advising, lobbying and being responsible for permits (Tunnelplan, 2021). One new position was added in the 2008-2015 time period, being the constructor position which was taken up by the contractor.

The boundary rule state for both time periods was closed entry and open exit. No new actors were allowed at the negotiation table in either periods of analysis. In between both 1989 and 2008, the boundary rule state was partially open. This allowed Prorail and the contractor to join due to them becoming important stakeholders within the Combiplan Nijverdal project. The rule state was open in both time periods, but no stakeholder left as it meant missing out on potential benefits and having no influence on the project.

A difference can be seen in the rule states of the choice rule category between both analyses. Where in the 1981-1989 period the rule state was rigid, in 2008-2015 it was flexible. The rigid rule state had a negative influence on seizing the JIO, as the 1981-1989 period was characterized by all the procedures that had to be followed by Rijkswaterstaat. These procedures resulted in the creation of multiple reports and advices that meant the JIO was not being seized (Tunnelplan, 2021). During the 2008-2015 period, actors were able to customize their procedures to the specific scenario of the Combiplan Nijverdal. The reason rules-in-use changed towards a flexible rule state is a result of other actors gaining influence within the project and of the processes simply not working, as was stated by the interviewee. The flexibility allowed actors to make agreements with each other, which positively influenced the seizing of the JIO.

The information rule state has changed from being restrictive in 1981-1989 to being facilitative in 2008-2015. Information in the 1981-1989 period was only shared via official documents and reports from Rijkswaterstaat to the other actors. This had as result that a low of information was unshared, prohibiting actors from making informed decisions. During the 2008-2015 period there were a lot of meetings with multiple actors. The interviewee stated that they were communicating and meeting full time. This has led to a facilitative rule state in the 2008-2015 period. The sharing of information allowed the different actors to make informed decisions, having a positive influence on seizing of the JIO.

The aggregation rule state for both analyses is Non-symmetric. Actors with more influence were able to leverage that influence into the decision making process meaning the various actors were not equals. However, it is important to notice that the rule state has shifted from being heavily non-symmetric in 1981-1989 towards a more symmetric rule state in 2008-2015. Actors such as the municipality of Hellendoorn and the contractor were given some influence and were able to negotiate with actors that have more influence. This had the effect of collectively attractive decisions being opted for rather than solely individually attractive decisions, which positively influenced the seizing of the JIO.

The rule state for the scope rule category has gone from heterophily in the 1981-1989 period to homophily in the 2008-2015 period. Actors in the 1981-1989 period had different intended outcomes as a result of the various project scales used by the actors. In the 2008-2015 period a collective scope goal was agreed upon, aligning the different outcomes that actors had intended. This scope agreement caused the rule state to turn to homophily.

Pay-off rule state was in both analyses proximate. In both the 1981-1989 and the 2008-2015 period actors were willing to invest in the project as it served their own interests. The risk sharing further increased the willingness and ability to invest, as the biggest risks were for the actors that were best able to handle risks.

6. Conclusion & discussion

This research explores the impact of changes in rules-in-use on the seizing of JIO Combiplan Nijverdal. Rule states are representations of the rules-in-use within rule categories that can be used to identify a positive or negative influence on the seizing of a JIO. A shift from a singular rule state from having a negative influence towards having a positive influence does not fully explain why a JIO is being seized. Furthermore, the existence of a negative rule state does not mean a JIO can not be seized. It is rather the combination of changes in rule states and rules-in-use that have impacted the seizing of the JIO Combiplan Nijverdal. Changes in the rules-in-use of the choice rule category, the information rule category and the scope rule category were found to have the most impact in going from a state of non-seizing to a state of seizing the JIO. The rule states of these categories have shifted from indicating a negative influence towards indicating a positive influence. Changes in rules-in-use of the aggregation rule category were also found to have an impact on seizing the JIO. These were not strong enough changes to indicate a positive influence, rather indicated a less negative influence. For the position rule category, the boundary rule category and the pay-off rule category there have not been significant changes in the rules-in-use or the rule states. An impact on the seizing of the JIO Combiplan Nijverdal has not been found. Interesting however, is the closed entry rule state of the boundary rule category. A closed entry was expected to negatively influence the seizing of a JIO, but was found to have a neutral influence. The neutral influence is a direct result of the complexity of the case remaining constant rather than increasing as more actors join. As this study concerns a very specific case, results from this study can not be applied to other cases. This study was executed in order to increase the number of case studies and knowledge about the impact of rules-in-use on JIOs. Creating a large data set of case studies gives room for future studies to further research the impact of rules-in-use on JIOs. A better understanding of the rules-in-use can increase the seizing of future JIOs. For this study, considerations about the data are necessary. Information about the case was scarce, online documents did not contain a lot of in-depth knowledge about the case. Furthermore only one interview has been conducted, as stakeholders were not willing to cooperate with the study and people with sufficient information had already left their jobs. Lastly, policy documents were hard to find, as most of them have already been taken offline or are no longer accessible. For conducting other case studies, it is advised to include a new section in the case selection method to ensure enough data is available.

References

- Baren JR (2009) *Infrastructure: Rebuilding, Repairing and Restructuring*. New York: Nova Science Editors, inc. Available at: <https://search-ebSCOhost-com.proxy-ub.rug.nl/login.aspx?direct=true&db=nlebk&AN=333650&site=ehost-live&scope=site> (Accessed: 23 February 2021). (accessed 23 February 2021).
- Clifford NJ, Cope M, Gillespie TW, et al. (2016) *Key Methods in Geography*.
- Feiock RC (2013) The Institutional Collective Action Framework. *Policy Studies Journal* 41: 397–425.
- Gerber ER, Henry AD and Lubell M (2013) Political homophily and collaboration in regional planning networks. *American Journal of Political Science* 57(3). Blackwell Publishing Ltd: 598–610. DOI: 10.1111/ajps.12011.
- Herzberg R and Ostrom V (2000) Votes and Vetoes. In: McGinnis M (ed.) *Polycentric Games and Institutions: 646 Readings from the Workshop in Political Theory and Policy Analysis*. University of Michigan Press, pp. 168–183.
- McGinnis MD (2011) *An Introduction to IAD and the Language of the Ostrom Workshop: A Simple Guide to a Complex Framework* sj_401 169..184. *The Policy Studies Journal*. Available at: <http://php.indiana.edu/>.
- Ministerie van Infrastructuur en Milieu (2015) *Structuurvisie Project Calandbrug*. Den Haag.
- Neef R and Busscher T (n.d.) *Incentivizing collective action: An analysis of the impact of institutional rule states on collective infrastructure investments*. Available at: <https://mc04.manuscriptcentral.com/epc-pion>.
- Ostrom E (2009) *Understanding Institutional Diversity*. Princeton University Press. DOI: doi:10.1515/9781400831739.
- Ostrom E (2011) Background on the Institutional Analysis and Development Framework. *Policy Studies Journal* 39: 7–27.
- Ostrom E (2015) Governing the Commons: The Evolution of Institutions for Collective Action. In: *Governing the Commons*. Cambridge University Press, pp. 58–102. DOI: 10.1017/cbo9781316423936.004.
- Ostrom E and Basurto X (2011) Crafting analytical tools to study institutional change. *Journal of Institutional Economics* 7(3): 317–343. DOI: 10.1017/S1744137410000305.
- Ostrom E, Gardner R and Walker J (1994) *Rules, Games and Common-Pool Resources*. University of Michigan Press.
- Punch KF (2014) *Introduction to Social Research*. 3rd ed. London: SAGE.
- Rashid Y, Rashid A, Warraich MA, et al. (2019) Case Study Method: A Step-by-Step Guide for Business Researchers. *International Journal of Qualitative Methods* 18. SAGE Publications Inc. DOI: 10.1177/1609406919862424.
- Schittekatte M and van Hiel A (1996) Effects of Partially Shared Information and Awareness of Unshared Information on Information Sampling. *Small Group Research* 27(3): 431–449.

Sproule-Jones M (1993) *Governments at Work Canadian Parliamentary Federalism and Its Public Policy Effects*. University of Toronto Press.

Tunnelplan (2021) Tunnelplan. Available at: <https://www.tunnelplan.nl/> (accessed 10 March 2021).

van Heeswijk H (2021) Combiplan and Station Nijverdal. Available at: <https://www.heeswijk.nl/projecten/combiplan-en-station-nijverdal.html> (accessed 10 March 2021).

Varughese G and Ostrom E (2001) The Contested Role of Heterogeneity in Collective Action: Some Evidence from Community Forestry in Nepal. *World development* 29(5): 747–765. Available at: www.elsevier.com/locate/worlddev.

Yin RK (2003) *Case Study Research: Design and Methods*. Sage Publications Inc.

Appendix A

Interview Guide

Before interview:

Research the case to get more information.

Set up online interview and get recording material ready.

Let the interviewee sign a consent form.

Introduction

Make some small talk with the interviewee, ask about their day, weather or current projects.

Explain the aim of the research.

Question 1 (general):

How are you involved in the Combiplan?

-> what did you do? What were your responsibilities?

-> what was the scope of the project in general?

Question 2 (position rules):

What other parties were/are involved?

-> what were their goals?

-> what were their roles and positions withing the project?

Question 3 (boundary rules):

How did you and the other parties get involved in the project?

-> entry rules/exit rules?

-> how did the parties get their position withing the project?

-> new parties or parties leaving?

Question 4 (information rules):

What information was available prior/during the project?

-> information sharing between parties

-> how was information shared? And how often? Rules for sharing?

-> what information about other parties did you have?

-> did that information influence your decision making?

Question 5 (choice rules):

What actions did you take during the project?

-> how did they effect the other parties and the outcome of the project?

-> how were the effects dealt with?

-> why were you able to/not able to take certain actions?

What action did the other parties take?

-> how did they effect you, other parties and the outcome of the project?

-> how did you deal with the effects?

-> why were you able to/not able to take certain actions?

Question 6 (aggregation rules):

How were decisions made that impacted multiple parties?

-> formal or informal decision making?

- > who were in control/who weren't (veto)?
- > did the control positions shift during the project?

Question 7 (scope rules):

Did all parties have the same intended outcome?

- > how did they try to change the intended outcome?
- > did they succeed? Why/why not?

Did the scope of the project change?

- > how did it affect your project scope?

Question 8 (payoff rules):

How were the risks and rewards spread during the project?

- > Where there payoff rules for the costs and benefits?
- > Who were most at risk/who had most to benefit?

Question 9 (further questions):

Do you have anything else you would like to add about the project?

Close interview:

Thank interviewee for their time and information.

Tell them that the information will be transcribed and used in the paper.