

# **Intermunicipal cooperation on a regional level**

*Research regarding the influence of regional, network and quality of interaction factors on the performance of intermunicipal cooperation in COROP and FUA regions in the Netherlands.*

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## **Abstract**

Two camps could be distinguished in the debate on regional governance: those who are in favour of a more centralized solution of governance (regional reformers) and those who favour a more decentralized solution of governance (new regionalist). Empirical evidence regarding the views is rare. This thesis delivers a contribution to the debate by investigating the influence of regional factors, network factors and quality of interaction factors on the intermunicipal cooperation performance at a regional level in the Netherlands (COROP n = 40 and FUA n = 35) from a monocentric and polycentric view. Results based on a correlation analysis show that there is no evidence for the monocentric view. Regional factors do not show a significant correlation with the performance of intermunicipal cooperation, whereas the quality of interaction shows a positive correlation with intermunicipal cooperation performance. The results regarding the direct influence of network factors (and indirect on quality of interaction) show no support for the monocentric view and weak support for the polycentric view. Regions that are characterized by a lead municipality report lower levels of transaction costs compared to regions without a lead municipality. Recommendations are presented in the conclusion of this thesis.

**Keywords:** Regional Governance, Intermunicipal cooperation

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# **1. Introduction**

## **1.1 Regional governance and intermunicipal cooperation**

Governance is a phenomenon that could be encountered in and between the different levels of society (local to global). The arrangement of governance at a regional level is a widely debated topic in the academic world and occurs frequently in the public debate. Ansell and Gash (2007) argue that when information becomes more specialized and the existing institutions become more complex, the need for intergovernmental cooperation structures becomes higher. However, the arrangement of such intergovernmental cooperation structures is debated and a perfect solution is far from near. Roughly two camps can be distinguished within the debate on regional governance and intergovernmental cooperation: those who are in favour of a more centralized solution of governance and those who favour a more decentralized solution of governance (Jacobsen, 2014; Tavares & Feiock, 2014). Those who are in favour of a more centralized solution to regional governance are known as the regional reformers and those who are in favour of a more decentralized solution to regional governance are known as the new regionalist (Feiock, 2004; Boogers, Klok, Denters & Sanders, 2016). The regional reformers argue that a more monocentric system would bring efficiencies of scale to the regional governance structure, whereas the new regionalist suggest that a more polycentric view would enhance the democratic quality of the regional governance structure. Both views acknowledge that some sort of regional governance structure is needed to cope with problems that concern production and allocation inefficiencies and economic growth, prosperity and employment (Boogers et al. 2016). The success of the regional governance structures that are formed in response to the previous mentioned problems depend on the type of policies, community characteristics, political institutions and the network structures (Feiock, 2007). The governance structures that arise do not necessarily only involve governmental agencies but could also involve private and not-for-profit organizations. These structures come in a variety of forms (Feiock, 2004). Examples of these arrangements are inter-local agreements, intergovernmental contracts, regional councils and partnerships (Feiock, 2008).

This thesis focuses on intermunicipal cooperation at a regional level in the Netherlands. The cooperation between municipalities could be defined as the single- or multi-purpose arrangement of joint service production between two or more local

governments to capture benefits like economies of scale, quality improvements and broader policy services (Feiock, 2007; Feiock, 2008; Swianiewicz, 2011; Bel & Warner, 2014). Intermunicipal cooperation structures could either have a voluntary or regulated character. Bel and Warner (2014) noticed that intermunicipal cooperation structures in the US have a more voluntary character, while these cooperation structures in Europe are more derived from regulation. One of the main drivers behind intermunicipal cooperation is the principle of economies of scale that result from joint production of a variety of services (Swianiewicz, 2011; Tavares and Feiock, 2014). The process of waste disposal in different municipalities or the shared ownership in a water-treatment facility are some of the examples of joint production where economies of scale could result. Another reason why municipalities cooperate could be found in the physical environment of a region (Swianiewicz, 2011). The physical environment forces municipalities to cooperate since the services provided run through multiple areas or the municipalities have to cooperate since the environment leaves no other options. A third reason why municipalities cooperate derives from the fact that municipalities want to increase their visibility (Swianiewicz, 2011). A promotion campaign regarding attracting new investors is an example of an attempt to increase visibility. A final reason that explains cooperation is the threshold for certain projects that the European Union (EU) supports (Swianiewicz, 2011). Small municipalities do not have the requirements to pass the threshold and therefore cooperation could be a solution.

## **1.2 Development of regional governance in the Netherlands**

As mentioned in the beginning of this chapter, regional governance is a concept that is part of the public debate for a long time. The debate concerning regional governance has not missed the Netherlands and therefore the Dutch government faced their challenges regarding regional governance. According to the Dutch Ministry of Internal Affairs (2013) (Dutch: Ministerie van Binnenlandse Zaken en Koninkrijksrelaties) there are roughly three layers of government in the Netherlands: national, provincial and municipal. These three layers were realised during the new constitution in 1848. The Ministry of Internal Affairs (2013) noticed that five major events had implications for the three layers of government. First, the establishment of the EU created a layer of government above the national government. With the establishment of the EU, competences regarding policy areas of local, regional and national governments are

transferred to a transnational level. A second major event is the development of technology. Due to this development, communication is made more easily and distances between municipalities are more efficiently travelled. A third implication for the structure of governments in the Netherlands is the increase in number of municipal inhabitants. Back in 1848 the average number of inhabitants in a municipality was 3,000. This number grew to 42,000 by 2013. Municipalities gained more competences with this growth. The role of the welfare state had major implications on the arrangement of government in The Netherlands and could be accounted as a fourth major implication. The last implication regarding the arrangement of government is the upcoming democratization of society. People gained the ability to receive information and express their opinion more easily. These five major changes in society have implications for the arrangement of governments. In response to previous implications, the Dutch government initiated three major changes in the government structures of the Netherlands (Boogers et al., 2016): municipalities became larger in size and competences and subsequently the number significantly lowered (in 1848 there were 1204 municipalities compared to 388 in 2017). In response to the variety in cooperation structures, the Dutch national government created cooperation regions that had to serve as a standard. However, this did not come into law. The last major change by the Dutch national government was the change to the Joint Provision Act (Dutch: Wet gemeenschappelijke regelingen, WGR).

### **1.3 Problem**

The two prevailing views on regional governance stress different effects of centralized or decentralized solutions towards regional governance issues. This thesis will contribute to the debate of regional governance by focussing on intermunicipal cooperation in COROP and FUA regions in the Netherlands. The inquiry focuses on the effect of regional, network and quality of interaction factors on the performance of intermunicipal cooperation. Analysis regarding intermunicipal cooperation has been done on the municipal level (e.g. Boogers et al. 2016), however not at a regional level.

It is therefore interesting to conduct research at a regional level. The Commission of Regional Research (Dutch: Coördinatiecommissie Regionaal Onderzoeksprogramma, COROP) established 40 COROP regions according to the principle of commuter streams

(Ministry of Internal Affairs, 2013) in 1970. The COROP regions are established in order to get a better view of the economical development in the urban areas (Ministry of Internal Affairs, 2013). These regions are still used for statistical analysis by the Dutch Government and have not been changed since their establishment. The COROP regions are also used by the EU and categorized as NUTS-3 type regions (Eurostat, 2015). Somehow similar to these COROP regions are the FUA regions developed by the OECD in 2011. FUA regions exist out of an urban economical core and an urban hinterland that exists out of municipalities that are connected to the core (Brezzi, 2012). The usage of these regions is also somehow similar to the usage of COROP regions. FUA regions could be used to identify economical development of metropolitan areas. Both types of region stress the economical development of regions but information regarding intermunicipal cooperation in those regions has not been analysed. The COROP and FUA regions are not overlapping. Appendix A and B hold a COROP and FUA map in which the municipalities and cooperation ties are shown. From these maps could be concluded that the two types of regions show differences in division (e.g. COROP region Amsterdam has fewer municipalities than FUA region 1). The COROP and FUA regions are interesting to study considering the following aspects:

- The two types of regions differ in the aspect of age. COROP regions are created in 1970 and FUA region in 2011. It is interesting to see whether difference in time leads to other results considering the above stated.
- Whereas the division in COROP regions fully covers the Netherlands, the FUA division does not. It is therefore interesting to see if this leads to a difference in intermunicipal cooperation results since the FUA regions are more urban focused.
- Both types of regions could be used in international comparison. COROP regions are (as earlier mentioned) classified as NUTS-3 regions by the EU and FUA regions function as the standard for the OECD and could therefore be useful for comparative studies with other (similar) regions.

The regions are similar regarding the principle upon which they are based but differ in aspects of age, coverage of the Netherlands and international use. Based on the above stated, the following research question has been phrased:

*“To what extent do regional, network and quality of interaction factors affect the performance of intermunicipal cooperation at COROP and FUA regional level in the Netherlands?”*

#### **1.4 Contribution**

This thesis will contribute in a practical and scientific way to the debate on regional governance. As stated in the beginning of this chapter, it is not clear whether regional governance should take a more centralized or decentralized form. Both public administrators and scholars have different views regarding this phenomenon. The contribution to this debate in a practical sense is that public administrators could get an insight in the performance of intermunicipal cooperation at a regional level in the Netherlands and whether a more mono- or polycentric view towards regional governance should be applied. The results of this thesis could also be used to compare the results of COROP or FUA regions in the Netherlands with other NUTS-3 regions or international FUA regions. This thesis also contributes to the scientific debate concerning regional governance, by expanding the existing body of knowledge on regional governance with an inquiry concerning the intermunicipal cooperation in the Netherlands at a regional level.

#### **1.5 Structure of thesis**

This chapter gave an introduction in the topic of regional governance and its development in the Netherlands and a problem description. Chapter two explains the theoretical framework upon which this research is based. The third chapter provides a methodological section in which the various variables are operationalized and the research setup will be explained. The fourth chapter provides the results of the research conducted and the fifth chapter provides a conclusion regarding the findings and the recommendations that could be given on basis of the results.

## **2. Theoretical Framework**

*Central is this thesis is the influence of regional, network and quality of interaction factors on the performance of intermunicipal cooperation at a regional level. The first part of this chapter will outline what is understood by the performance of intermunicipal cooperation. The second part of this chapter will focus on the factors that influence the performance of intermunicipal cooperation. The factors will, as far as possible, be explained on the basis of the two prevailing views on regional governance; those who favour centralized governance and those who favour decentralized governance.*

### **2.1 Performance of intermunicipal cooperation**

The underlying principal in intermunicipal cooperation could be explained by the institutional collective action theory (ICA). The ICA theory holds that governments favour solutions in which they can achieve more than when acting solely (Feiock, 2004; Tavares and Feiock, 2014). This principle of ICA is similar to the principle of the game theory. The game theory implies that an actor is not concerned with its own decisions but also with the decisions of other actors (Easley and Kleinberg, 2010). Based on the ICA and game theory, municipalities first assess the various benefits and transaction costs that arise from possible intergovernmental structures before actually starting to cooperate with other municipalities. Such ICA cooperation structures arise when the transaction costs are sufficiently low and when the benefits are sufficiently high. The benefits and transaction costs of the intermunicipal cooperation depend on the goal of cooperation.

#### **Benefits**

According to Provan and Kenis (2008) benefits could be described as the positive outcome of the intermunicipal cooperation and this positive outcome could not be achieved when the municipalities did not cooperated. However, the character of effectiveness is normative and therefore depends on the criteria that will be chosen to evaluate effectiveness on (Provan and Milward, 1999). The benefits of intermunicipal cooperation are collective or selective (Feiock, 2008; Boogers et al. 2016). Selective benefits are those benefits that apply to individual municipalities and not necessarily to other municipalities involved in the cooperation structure. Boogers et al. (2016) state that such benefits only occur when municipalities actively participate in the cooperation

structures. An example of a selective benefit is the efficiency that could occur in providing services to the service area of the municipality (economies of scale). The benefits that are collective do not necessarily require that municipalities actively participate in the cooperation structures (Boogers et al., 2016). The types of benefits could result for example from policies that are regional oriented and are beneficiary to the entire region. Examples of such policies are health or infrastructure policies. The positive outcome of such cooperation structures between municipalities could be evaluated at three different levels (Provan and Milward, 1999): the community level (the region), the network level (cooperation structures between the municipalities) or at the organization or participant level (individual municipalities). Since municipalities could benefit from cooperation structures while they are not involved in such cooperation structures, it is important to make a difference between the benefits for individual municipalities and regional benefits (Boogers et al. 2016).

### **Transaction costs**

The cooperation structures between municipalities do not only bring benefits to the municipalities, but also require effort from those municipalities that participate in the cooperation structure while interacting with each other. According to Feiock (2008), Bel and Warner (2015), and Boogers et al. (2016), five types of transaction costs can be distinguished: transaction costs for gaining information on participating municipalities and issues (information), coordination of activities during the process towards decisions (coordination), negotiation on decisions (negotiation), ensuring that the agreement will be executed (enforcement) and representation of a particular municipalities during the process towards a decision (agency). The transaction cost would be higher when municipalities interact more with each other and lower when there is less interaction.

### **Performance**

The sum of the benefits and transaction costs could be defined as the performance of intermunicipal cooperation. The performance increases with high benefits and low transaction costs. A high performance denotes a greater difference between the transaction costs and the individual and regional benefits combined.

## **2.2 Factors affecting performance of intermunicipal cooperation**

A variety of organizational and non-organizational factors could influence the performance of intermunicipal cooperation. Boogers et al. (2016) investigated what the influence is of the size of municipalities, the complexity of cooperation structures, the regulatory regime and the culture of cooperation on the performance of intermunicipal cooperation at a municipal level in the Netherlands. On the basis of the research conducted by Boogers et al. (2016) the following factors that affect the performance of intermunicipal cooperation could be distinguished: regional, network and cultural factors. The following three sections will outline the factors, previous research conducted regarding these factors and hypotheses that will be inquired in this thesis.

### **2.2.1 Regional factors**

Regional factors refer to those factors that are characteristic for the region. Examples include demographic, economical and geographical features. The regional factors that are of interest in this thesis are the size of the region, the number of municipalities in a region and the presence of a lead-municipality in the region.

#### **Size**

Boogers et al. (2016) conclude that there is no particular relation between the population size of a municipality and the performance of intermunicipal cooperation. Nonetheless, Boogers et al. (2016) conclude that cooperation is more useful for municipalities with a smaller population size since they benefit from the capacity increase by cooperating with other municipalities. However, this effect is only put to the test at a municipal level and not at a regional level. The population size of a region is interesting since it resembles the capacity of a region to deal with challenges the region faces (Ahrend, Farchy, Kaplanis & Lembcke, 2014). Regions with a higher population size have more capabilities in dealing with challenges than regions with a small population size (Boogers et al. 2016). The underlying principle behind this could be found in economies of scale. The principle holds that larger resources would reduce the average costs (McAfee, 2006). Kan, Genugten, Lunsing and Herwijer (2014), argue that municipalities that are larger in population size also face larger challenges and this could therefore have a negative effect on the performance of intermunicipal cooperation. However, these larger municipalities receive financial compensation for

the larger challenges they face and therefore this negative effect mentioned by Kan et al. (2014) will not be considered. On the basis of the above mentioned, the following hypothesis regarding influence of population size on the performance of intermunicipal cooperation has been stated:

H1: The higher the population size of a region, the higher the performance of intermunicipal cooperation at a regional level

The size of a region could also be expressed as the geographical size of a region. Municipalities in a region with a higher geographical size could face challenges in overcoming those distances. A greater distance could imply difficulties in communicating and therefore difficult and inefficient interaction. Difficulties in interaction could result in higher transaction costs and therefore lower performance. This could turnout into diseconomies of scale. On the basis of the above stated, the following hypothesis has been stated:

H2: The larger the geographical size of a region, the lower levels of performance of intermunicipal cooperation at a regional level

### **Fragmentation**

Fragmentation refers to the amount of municipalities in a region. The more fragmented a region is, the higher the complexity of a region becomes. Advocates of the monocentric approach argue that transaction costs rise and the benefits of cooperation structures lowers when the amount of participants rises (Boogers et al. 2016). Different from the view of monocentric advocates is that advocates of a more polycentric cooperation structure see the benefits of fragmentation. Proponents of a polycentric view would argue that fragmentation leads to a more flexible system and a system that has a variety in resources and could therefore handle a variety of challenges (Boogers et al. 2016). On the basis of the above stated arguments, the following two hypotheses have been stated:

H3<sub>polycentric</sub>: The higher the number of municipalities in a region, the higher the performance of intermunicipal cooperation at a regional level

H4<sub>monocentric</sub>: The higher the number of municipalities in a region, the lower the performance of intermunicipal cooperation at a regional level

### **Variation in municipal size**

According to Provan and Kenis (2008) the governance form of a network could be characterised on the basis of two dimensions: the extent to which governance is brokered and whether the governance is internally or externally exercised. Provan and Kenis (2008) distinguish three forms of network governance: participant governed network, lead-organization and network administrative organisation (NAO). A participant governed network is a network that has a decentralized form of network governance where the participants within the network make the decisions. The most decentral form of network governance is called shared governance. If network governance is central then either a lead-organization (internal governance) could make the decisions for the network or a NAO (external governance). Network governance that occurs by and through a lead organization is highly centralized and brokered (Provan and Kenis, 2008). A lead organization is an organization that takes the lead in a network whether or not mandated and provides coordination and makes decisions that are relevant for the entire network (Provan and Kenis, 2008). A lead organization or lead municipality could be characterized by the significant capabilities to lead the intermunicipal cooperation structures in a region. The population size of a municipality could be a determinant for the possibility of the lead role in a region. Large population sized municipalities need to serve a greater service area than small population sized municipalities and therefore need more resources. A lead organization could use the resources to force decisions within the network and speed up decision-making and therefore enhance the performance of the network. On the basis of the above stated, the following hypothesis concerning lead municipalities has been stated.

H5: Regions with a municipality that is significantly larger in population size than other municipalities have higher levels of intermunicipal cooperation performance at a regional level.

### 2.2.2 Network factors

Heffen and Klok (2000) distinguish between three state models: market, hierarchy and network. The intermunicipal cooperation structures are networks. A network as a state model could be defined as a structure of interdependence between three or more organizations in which none of the organizations is hierarchical higher than the others and by which the organizations try to achieve their own and collective goals (O'Toole, 1997; Provan & Kenis 2007; Meier & O'Toole 2012). Lubell, Schneider, Scholz and Mete (2002), Torenvlied, Akkerman, and Schalk (2012) and Ryu and Johansen (2015) showed that organizations in networks could achieve more than when acting on their own. Therefore the basis of a network could be found in the social, economical and political relations between the actors in a network instead of a hierarchical actor (Feiock, Lee, Park, Lee, 2010). As with the fragmentation of a region, the two prevailing views on regional governance both stress different effects for the factors that make up the network complexity. Advocates of a polycentric system see an increased complexity as a positive feature of a network. The increased complexity results in a higher variety and therefore the network could handle a variety of challenges. This would lead to a higher performance of the network. Advocates of a monocentric system see the increased complexity as a negative feature of network. A network that is more complex leads to higher transaction costs and therefore a lower performance. Boogers et al. (2016) stress that a monocentric view on networks could be supported by the Wilsonian-Weberian principle. This principle holds that actors in a less complex system could be held more accountable and this would imply that those actors search for more efficient solutions in organizing a system of governance. The efficient solutions could lower the transaction costs and therefore increase the performance. Boogers et al. (2016) found that an increase in the complexity of a network does not account for a lower performance as proponents of a monocentric system argue. Based on these prevailing views, the following hypothesis have been stated:

H6<sub>polycentric</sub>: The higher the complexity of a cooperation network, the higher the performance of intermunicipal cooperation at a regional level

H7<sub>monocentric</sub>: The higher the complexity of a cooperation network, the lower the performance of intermunicipal cooperation at a regional level

Network factors are those features that are characteristic for the intermunicipal cooperation arrangements (IMC) in a certain region and therefore the network complexity. Boogers et al. (2016) stress that the following factors are characteristic for the network of municipalities (regions) and therefore its complexity:

- The number of different IMCs in a region.
- The number of unique cooperation partners of a municipality in all its IMCs in a region.
- The average of the extent to which municipalities in a region are always cooperating with the same municipalities in their IMCs (Incongruence).
- The average of the extent to which the IMCs of municipalities in a region are designed for one purpose (Singularity).

### **2.2.3 Quality of interaction factors**

Besides the structural factors of regions and network factors, the third variable focuses on the quality of interaction within a region. A sufficient quality of interaction would probably produce favourable results for intermunicipal cooperation. Cooperation ties would be stronger when actors judge other actors as trustable and decisive (Feiock et al. 2010). Trust would lead to a network where actors do not constantly have to keep an eye on each other and decisiveness would speed up the decision-making process. Coordination and information are types of transaction costs that could be reduced by a favourable quality of interaction. Both monocentric and polycentric advocates of regional governance acknowledge the presence of sufficient quality of interaction as favourable. Boogers et al. (2016) also conclude that a favourable quality of interaction enhances the results of intermunicipal cooperation. On the basis of the above stated, the following hypotheses regarding the quality of interaction factors of regions have been formulated:

H8: The higher the quality of interaction of municipalities in a region, the higher performance of intermunicipal cooperation at a regional level

The advocates of polycentric and monocentric solutions towards regional governance both agree that sufficient quality of interaction is favourable; the two camps stress different effects that network structures have on the quality of interaction. Proponents

of polycentric solution argue that the complexity of cooperation structures has a positive effect on the quality of interaction and proponents of a monocentric solution argue that a system with a small degree of complexity would have a positive effect on the quality of interaction (Boogers et al. 2016). Municipalities in a polycentric system could choose with whom they want to cooperate and this leads to cooperation ties according to the proponents of those systems. According to proponents of monocentric systems, it are the smaller systems that have a positive effect on the quality of interaction. The stability of such smaller systems could be better enhanced and the participating municipalities are more likely to know each other better (Boogers et al. 2016). On the basis of the above stated arguments regarding the influence of cooperation structures on the quality of interaction, the following hypotheses have been stated:

H9<sub>polycentric</sub>: The higher the level of complexity in a region, the higher the quality of interaction

H10<sub>monocentric</sub>: The higher the level of complexity in a region, the lower the quality of interaction

As mentioned in part 2.2.3 of this chapter, a lead municipality has the capabilities to lead the network of intermunicipal cooperation since it has a higher population size and therefore more resources and would therefore have a positive effect on the intermunicipal cooperation in a region. However, Provan and Kenis (2008) argue that it is not only the availability of resources that determines the success of a lead organization (municipalities) but a combination of regional and quality of interaction factors (table 1).

**Table 1.** Key predictors of governance forms (Provan and Kenis, 2008)

Governance forms	Trust	Number of participants	Goal consensus	Need for network-level competencies
Shared governance	High density	Few	High	Low
Lead organization	Low density	Moderate	Moderately low	Moderate
Network administrative organization	Moderate density	Moderate to many	Moderately high	High

Provan and Kenis (2008) argue that a lead organization governance form is preferred when trust and consensus levels are low and the number of participants moderate.

Table 2 displays the expected performance of intermunicipal cooperation when trust and the number of municipalities in a region in combination with a lead and non-lead municipality region are taken in to account. Expected is that regions with high levels of trust and low number of participants have the highest levels of intermunicipal cooperation. The least favourable results are generated when trust and consensus is low and the number of participants high. The same effects apply to the situation in which the region does not have a lead municipality. Also expected is that regions with a lead municipality have higher scores regarding intermunicipal cooperation performance than regions without a lead municipality, given the trust and participants' conditions are the same, except in the case of high trust and low participants. This situation is favourable for a shared governance form (Provan and Kenis, 2008), which subsequently could lead to favourable intermunicipal cooperation performance.

**Table 2.** Expected performance of intermunicipal cooperation

Lead municipality

Trust	Number of participants	
	High	Low
High	+	++
Low	+/-	+

Non-lead municipality

Trust	Number of participants	
	High	Low
High	+/-	++
Low	--	-

### **3. Methodology**

*All the variables and the research setup explained in this chapter will be linked to COROP and FUA regions in the Netherlands. This chapter will first focus on the COROP and FUA regions as the units of analysis. Subsequently the data that will be used will be highlighted. The final, and major part of this chapter focuses on the research setup and the indicators that will be used for the different variables stretched in chapter two. This inquiry exists out of two analyses; an analysis conducted at a COROP regional level and an analysis conducted at a FUA regional level.*

#### **3.1 Units of analysis and dataset**

##### **Municipalities**

There are 388 municipalities in the Netherlands at the time of writing this thesis (Rijksoverheid, 2017). However, the dataset that is used in this thesis includes (Dataset Boogers et al., 2016) 393 municipalities. The merging of several municipalities is the reason for the declining number of municipalities in the Netherlands. One of the latest amalgamation is the creation of the municipality Meijerstad (CBS, 2017). Meijerstad is composed out of the former municipalities Schijndel, Sint-Oedenrode and Veghel.

##### **Regions**

The units of analysis for this thesis are the COROP and FUA regions in the Netherlands. The total number of COROP regions is 40 and these regions include all the municipalities in the Netherlands and are divided in 43 COROP-sub regions and 52 COROP-plus regions. The total number of FUA regions is 35 and these regions include 294 municipalities (74,8 % of 393). Since not all regions have 2 or more municipalities that fully responded to the questionnaire, the number of COROP used is 35 and 25 FUA regions.

##### **Dataset**

In order to test the influence of the three factors on the performance of intermunicipal cooperation, the dataset of Boogers et al. (2016) will be used. Boogers et al. (2016) sent out questionnaires to the 393 municipalities and 272 municipalities responded. The total number of complete filled in questionnaires was 243, which therefore accounts for a response rate of 61,8%. Important to notice here is that Boogers et al. (2016) mention

that the nonresponse could not be linked to a certain group of municipalities. The data for the geographical and population size is provide by Statistics Netherlands.

## **3.2 Operationalization**

This thesis could be divided into four major variables with each several sub-variables. The dependent variable of this thesis is the performance of intermunicipal cooperation in COROP or FUA regions. This variable could be divided into the local and regional benefits, and transaction costs of intermunicipal cooperation. The independent variables are: regional factors, network factors and quality of interaction factors. The regional factors exist out of the population and geographical size, number of municipalities and the lead municipality. The network factors exist out of four sub-variables: the number of cooperation ties, the number of unique cooperating municipalities, the incongruence and the singularity. The quality of interaction factor exists out of two sub-variables: trust and consensus, and decisiveness.

### **3.2.1 Performance of intermunicipal cooperation**

Boogers et al. (2016) distinguished between local benefits and regional benefits for municipalities in their research and used six questions to identify those benefits. The first three questions identified to what extent intermunicipal cooperation lead to solution for local policy problems, the quality of local service provision and the quality of local public facilities (Boogers et al. 2016). The other three questions only differed to the above stated in the level of measurement (local or regional). Boogers et al. (2016) used three questions to identify the costs of intermunicipal cooperation. The questions focused on unnecessary complexity, useless consultations and high negotiations costs. Municipalities had to indicate, for each of the variables, on a scale of 1 to 10 how they rank the variables. The scores given by the municipalities will be aggregated to a regional level.

### **3.2.2 Regional factors**

- *Geographical size*: total number of square kilometres per COROP or FUA region
- *Population size*: total number of inhabitants per COROP or FUA
- *Fragmentation*: total number of municipality in a COROP or FUA region

- *Lead municipality*: a region with a municipality that is 100% larger in population size than the second largest municipality will be classified as a lead municipality region. Regions without a lead municipality are classified as non-lead municipality region.

### **3.2.3 Network factors**

- *Number of cooperation ties*: The number of cooperation ties will be measured by the average number of cooperation ties that a municipalities has in a COROP or FUA region.
- *Unique cooperating partners*: The number of unique cooperating municipalities per municipalities will be measured by the average number of unique cooperation municipalities per municipality in a COROP or FUA region.
- *Incongruence*: Boogers et al. (2016) calculated the incongruence by dividing the number of overlapping municipalities in IMCs by the total number of unique municipalities that participating in the IMCs. With this calculation, the scores per municipality could be calculated. Since Boogers et al. (2016) calculated the congruence instead of the incongruence; they subtracted 1 from each score. The average incongruence score of all municipalities in a COROP or FUA region will be used for the incongruence score of a region.
- *Singularity*: Boogers et al. (2016) used a distinction between 11 general policy domains on which the IMC could be based. Each municipality therefore got an average score of policy domains in the IMCs in which they cooperate. These scores will be aggregated to a regional level as a singularity score for COROP and FUA regions.

### **3.2.4 Quality of interaction factors**

Boogers et al. (2016) gathered the data on the quality of interaction by asking questions regarding the trust and consensus, and the decisiveness. Both sub-variables are ranked on a scale of 1 to 10. Boogers et al. (2016) used questions in their survey that focused on the consensus between municipalities, consensus within the intermunicipal cooperation network, trust between municipalities and trust within the intermunicipal cooperation network to gather data on trust and consensus. In order to gather data on decisiveness the question focused on compliance to agreements, swift and decisive actions, binding

obligations, agreements with tangible goals, and transparency (Boogers et al. 2016). The data that Boogers et al. (2016) gathered on the trust and consensus, and decisiveness of municipalities will be aggregated to a regional level. This implies that each COROP and FUA region holds a score on the average score of trust and consensus, and decisiveness.

## 4. Results

The first part of this chapter will explain the several variables that are tested in this research and the scores that were given to these variables. The second part of this chapter focuses on the effects that the independent variables have on the dependent variables. Due to the fact that several municipalities gave an incomplete response and some regions only contain one municipality, the total number of COROP regions is 35 and FUA regions is 25 on which the inquiry is based.

### 4.1 General results

#### 4.1.1 Performance of Intermunicipal Cooperation

The performance of intermunicipal cooperation is divided in local and regional benefits of intermunicipal cooperation and the transaction costs that come with intermunicipal cooperation. Scores for these variables are listed on a scale of 1 to 10. Figure 2 and 3 display the scores concerning the performance of the COROP and FUA regions. These scores make clear that there are significant differences in the scores that municipality give considering the performance of intermunicipal cooperation.

**Table 3.** Performance COROP regions

N = 35	Mean	SD.	Median	Max.	Min.
Local Benefits	5,95	0,74	6,06	7,00	3,67
Regional Benefits	6,42	0,75	6,44	7,67	4,33
Transaction Costs	5,46	1,06	5,42	3,33	8,17

**Table 4.** Performance FUA regions

N = 25	Mean	SD.	Median	Max.	Min.
Local Benefits	5,76	1,32	6,07	7,67	3,00
Regional Benefits	6,55	0,82	6,66	6,00	4,67
Transaction Costs	5,67	1,11	5,81	8,33	3,33

#### 4.1.2 Regional factors

The regional factors that are investigated in this research are divided in the following four sub-variables: the total number of municipalities in a region, the size of a region (geographical size and population size) and variation in municipal size. Table 4 and 5 make clear that regions differ significantly in the number of municipalities, which therefore results in a larger region (in both inhabitants and geographical surface).

**Table 5.** Regional factors COROP regions

N = 35	Mean	SD.	Median	Max.	Min.
Size (sq. km)	1123	710	958	3354	152
Size (inhabitants)	458938	335159	381876	1403932	47560
Number of municipalities	10,69	6,04	10	26	2

**Table 6.** Regional factors FUA regions

N = 25	Mean	SD.	Median	Max.	Min.
Size (sq. km)	764	848	511	3963	110
Size (inhabitants)	453008	525423	261235	2420123	110337
Number of municipalities	9	9,192	6	43	2

**Table 7.** Municipal size variation

N = 35	COROP
Lead municipality regions	19
Non-lead municipality regions	16

#### 4.1.3 Network factors

The Network factors variable is divided in four sub-variables: the average number of cooperation ties, the average number of net partners, the average incongruence and the average singularity in a region. Both type of regions differ slightly on the above-mentioned sub-variables.

**Table 8.** Network factors COROP regions

N = 35	Mean	SD.	Median	Max.	Min.
Number of cooperation ties	15,55	2,45	15,4	22,1	11,33
Net partners	47,92	17,26	43,69	100,42	27,5
Incongruence	0,55	0,08	0,57	0,70	0,40
Singularity	9,63	0,21	9,66	9,95	9,05

**Table 9.** Network factors FUA regions

N = 25	Mean	SD.	Median	Max.	Min.
Number of cooperation ties	15,68	2,37	16,33	21,89	11,43
Net partners	43,82	17,60	41	96	12
Incongruence	0,53	0,09	0,53	0,72	0,35
Singularity	9,59	0,23	9,61	9,95	9,14

#### 4.1.4 Quality of interaction factors

The quality of interaction is divided in the trust and consensus and the decisiveness. COROP and FUA regions do not differ significantly in the given scores concerning the trust and consensus and the decisiveness according to figure 9 and 10.

**Table 10.** Quality of interaction factors COROP regions

N = 35	Mean	SD.	Median	Max.	Min.
Trust and Consensus	5,95	1,07	5,81	8,13	4,17
Decisiveness	5,63	0,61	5,63	7,17	4,20

**Table 11.** Quality of interaction factors FUA regions

N = 25	Mean	SD.	Median	Max.	Min.
Trust and Consensus	5,90	1,02	5,73	7,88	4,00
Decisiveness	5,56	0,73	5,55	7,00	4,20

## 4.2 Hypotheses

Table 11, 12, and 13 display the Pearson correlations for the COROP and FUA regions between the performance and the region, network and quality of interaction factors. The results that are presented in this section are based on the results presented in the previous mentioned tables.

### 4.2.1 Regional factors

#### Population size

Hypothesis 1 could not be confirmed. From the tables could be concluded that the population size of a region does not have a significant effect on the performance of intermunicipal cooperation in COROP and FUA regions. There is no evidence that transaction costs increase and the local and regional benefits decrease when the population size of COROP and FUA increases. However, the opposite could not be confirmed.

#### Geographical size

Hypothesis 2 could not be confirmed. The geographical size of a region does not show a significant relation with the performance of intermunicipal cooperation in COROP and FUA regions. There is no evidence that the transaction costs increase when the geographical size of COROP and FUA regions increases. From the table 12 could be

concluded that there is no evidence that the local benefits decrease when the size of COROP and FUA regions increases. The regional benefits shows opposing results. There is no evidence that the regional benefits in COROP regions increases when the geographical size increases. The opposite could not be said for FUA regions.

### **Number of municipalities**

Hypothesis 3 and 4 are both not confirmed. From the tables could be concluded that there is no evidence for the monocentric view and no significant evidence for the polycentric view. There is no evidence that the transaction costs increase when the number of municipalities increases. The local and regional benefits do not decrease when the number of municipalities rises in COROP and FUA regions.

## **4.2.2 Network factors**

### **Cooperation ties**

The number of cooperation ties does not show a significant relation with the performance of intermunicipal cooperation. There is no evidence that transaction cost increase when the number of cooperation ties in a COROP or FUA region rise. The local and regional benefits do not decrease when the number of cooperation ties in a COROP or FUA region rise. The monocentric view regarding the number of cooperation ties could therefore be disregarded, however, the polycentric view could not be confirmed.

### **Unique cooperation partners**

The number of unique cooperation partners shows a significant relation with the transaction costs in COROP regions (significant 0,015). This significant relation could not be established in the case of FUA regions. There is no evidence that the local and regional benefits decrease when the number of unique cooperation partners increases.

### **Incongruence**

The incongruence shows a significant relation with the transaction costs in COROP regions (significant 0,000). This significant relation could not be established in the case of FUA regions. There is no evidence that the local and regional benefits decrease when the incongruence increases.

## **Singularity**

The singularity in COROP and FUA regions does not show a significant relation with the intermunicipal cooperation performance. There is no evidence that transaction costs decrease when the singularity increases in COROP regions. This is not the same for FUA regions since there is no evidence that transaction costs increases when the singularity decreases. The local and regional benefits in COROP and FUA regions do not show evidence that supports the monocentric view.

Based upon the above mentioned results for the four variables that make up the network factors, hypothesis 6 is partly confirmed and hypothesis 7 could not be confirmed. There is no evidence for the monocentric view. However, the evidence for the polycentric view is rather weak.

### **4.2.3 Quality of interaction factors**

#### **Trust and consensus**

Considering table 12, the trust and consensus has a significant relation with the transaction costs of intermunicipal cooperation in both COROP and FUA regions (significant 0,002 and 0,000). There is no evidence that the trust and consensus increases and the local and regional benefits decreases.

#### **Decisiveness**

Decisiveness shows a significant relation with the transaction costs of intermunicipal cooperation in both COROP and FUA regions (significant 0,000 and 0,003). Decisiveness also shows a significant relation with local and regional benefits (significant COROP 0,004 and 0,033, significant FUA 0,029) except for the local benefits in FUA regions.

Based upon the results regarding the quality of interaction factors, hypothesis 8 is confirmed. Evidence regarding the relationship between the quality of interaction and the performance of intermunicipal cooperation is significant.

#### **Network factors on quality of interaction**

There is no evidence that the monocentric view regarding the influence of network factors on quality of interaction could be supported in FUA regions. This could not be

stated for the COROP regions since there are mixed results there. There is no evidence that the monocentric view regarding the influence of network factors on quality of interaction could be supported in both COROP and FUA regions. The only significant results are found in the incongruence. In case of the FUA regions, trust and consensus (significant 0,015), and decisiveness (Significant 0,037) increases when incongruence does. In the case of COROP regions, this effect only holds for decisiveness (significant 0,005). There is weak evidence for hypothesis 9 and no evidence for hypothesis 10.

**Table 12.** Independent variables on transaction costs

	COROP <sub>(n=35)</sub>	FUA <sub>(n=25)</sub>
Size (sq. km)	- 0,061	- 0,229
Size (inhabitants)	- 0,175	- 0,345
Number of municipalities	- 0,087	- 0,339
Cooperation ties	- 0,070	- 0,109
Net partners	* - 0,407	- 0,211
Incongruence	1** - 0,605	- 0,365
Singularity	0,133	- 0,131
Trust and consensus	2** - 0,510	4** - 0,722
Decisiveness	3** - 0,735	5** - 0,575

\* Significant at 0,05 (0,015), \*\* Significant at 0,01 (<sup>1</sup>0,000) (<sup>2</sup>0,002) (<sup>3</sup>0,000) (<sup>4</sup>0,000) (<sup>5</sup>0,003)

**Table 13.** Independent variables on local benefits

	COROP <sub>(n=35)</sub>	FUA <sub>(n=25)</sub>
Size (sq. km)	0,055	0,052
Size (inhabitants)	0,103	0,117
Number of municipalities	0,122	0,102
Cooperation ties	0,082	- 0,021
Net partners	0,308	0,169
Incongruence	0,266	- 0,024
Singularity	0,010	- 0,090
Trust and consensus	0,119	0,099
Decisiveness	** 0,479	0,265

\*\* Significant at 0,01 (0,004)

**Table 14.** Independent variables on regional benefits

	COROP <sub>(n=35)</sub>	FUA <sub>(n=25)</sub>
Size (sq. km)	- 0,192	0,039
Size (inhabitants)	0,163	0,152
Number of municipalities	0,076	0,127
Cooperation ties	0,298	0,020
Net partners	0,025	0,037
Incongruence	0,094	0,066

Singularity	- 0,95	- 0,088
Trust and consensus	0,235	0,359
Decisiveness	<sup>1*</sup> 0,361	<sup>2*</sup> 0,436

\* Significant at 0,05 (<sup>1</sup>0,033) (<sup>2</sup>0,029)

**Table 15.** Network factors on trust and consensus

	COROP <sub>(n=35)</sub>	FUA <sub>(n=25)</sub>
Cooperation ties	- 0,139	0,052
Net partners	- 0,005	0,291
Incongruence	0,258	*0,480
Singularity	0,025	0,208

\*Significant at 0,05 (0,015)

**Table 16.** Network factors on decisiveness

	COROP <sub>(n=35)</sub>	FUA <sub>(n=25)</sub>
Cooperation ties	0,054	- 0,020
Net partners	0,333	0,240
Incongruence	** 0,461	* 0,419
Singularity	- 0,034	0,129

\*\*Significant at 0,01 (0,005), \*Significant at 0,05 (0,037)

### Variation in municipal size

Table 17 shows the average scores for the local and regional benefits and the transaction costs for the lead municipalities COROP regions and non-lead municipalities COROP regions. Since the FUA regions are formed on the principle of a leading core, only 3 cases exist having a 'non-lead municipality' character. Consequently only the COROP regions are taken into account in this analysis. Table 17 shows evidence that the transaction costs are lower in lead municipality COROP regions (ANOVA significant 0,002). There is no evidence that local and regional benefits are higher in lead municipality COROP regions. Hypothesis

**Table 17.** Variation in municipal size COROP regions

N = 35	Local benefits	Regional benefits	Transaction costs
Lead municipality (19)	6,07	6,47	4,97
Non-lead municipality (16)	5,79	6,36	6,03

Difference Transaction Costs ANOVA significant 0,002

Table 18 shows the performance of intermunicipal cooperation in lead- and non-lead municipality COROP regions in combination with the trust and consensus and the

number of municipalities in those regions. As previously mentioned, the FUA regions are not taken into account here since the lack of cases.

- On the basis of table 18 could be concluded that the local and regional benefits, in case of the expected most favourable situation (high trust and low participants) for the COROP lead municipality regions, are higher than the other three situations (6,64 and 6,83). This is not the case for the transaction costs in COROP lead municipality regions (here costs are expected to be lowest, which is not the case: 4,87). In case of the expected most favourable situation (high trust and low participants) for the COROP non-lead municipality regions, the local and regional benefits are not the highest and the transaction costs score not the lowest (5,22, 5,92 and 5,93).
- On the basis of 18 could be concluded that the least favourable situation (low trust and high participants) for COROP lead-municipality regions, does not have the lowest score for regional benefits. The least favourable situation (low trust and high participants) has the lowest local benefits score (5,67) and the highest transaction costs score (5,67).
- Comparing the same situations of trust and participants between lead municipality regions with non-lead municipality regions, it could be concluded that lead municipality regions have lower transaction costs scores for all comparable situations (4,87, 4,69, 4,41 and 5,67 compared to 5,93, 5,40, 6,53 and 6,14). The local benefits score higher in the cases of high trust and low participants, and high trust and high participants (6,64 and 5,98 compared to 5,22 and 5,69) for lead municipality regions. Whereas the regional benefits only score higher in the case of high trust and low participants (6,83 compared to 5,92) for lead municipality regions.

Based on the results displayed in table 18 and the hypotheses presented in table 2, it could be stated that there is no evidence to support the hypotheses. Transaction costs are lower in the lead municipality COROP regions than in non-lead municipality COROP regions (given the conditions regarding trust and participants are the same). There is however no evidence that the local and regional benefits are higher in the case of lead municipality COROP regions. There is no evidence that the most favourable situation

(high trust and low participants) holds the highest scores and the least favourable situation (low trust and high participants) the lowest scores regarding intermunicipal cooperation performance. Based upon the results found, the hypotheses in table 2 could not be confirmed. The expected results on intermunicipal cooperation performance are not in line with results displayed in table 18.

**Table 18.** Lead- or non-lead municipality COROP regions in combination with trust and participants.

<b>Lead</b>		Local Benefits	Regional Benefits	Transaction Costs	N = 19
Trust	Participants				
High	Low	6,64	6,83	4,87	5
High	High	5,98	6,28	4,69	7
Low	Low	5,91	6,58	4,41	2
Low	High	5,67	6,32	5,67	5
<b>Non-lead</b>		Local Benefits	Regional Benefits	Transaction Costs	N = 16
Trust	Participants				
High	Low	5,22	5,92	5,93	3
High	High	5,69	6,88	5,40	3
Low	Low	6,09	5,92	6,53	3
Low	High	5,98	6,52	6,14	7

## 5. Conclusion

This thesis made an attempt to answer the following research question: to what extent do regional, network and cultural factors affect the performance of intermunicipal cooperation at COROP and FUA regional level in the Netherlands? In order to answer the research question, the data gathered by Boogers et al. (2016) was used and aggregated to a COROP and FUA regional level.

The results found show that the size (population and geographical) of region does not has a significant relation with the performance of intermunicipal cooperation. There is no evidence that the transaction costs increase and that the local and regional benefits decrease with the size of a region. The results on size are in line with the research conducted by Boogers et al. (2016). Regions with a lead municipality report lower transaction costs than region without a lead municipality. There is no evidence for a significant relation between the higher local and regional benefits and a lead municipality in a region compared to regions without a lead municipality. Whereas the previous concepts were not applicable to the monocentric or polycentric view on regional governance, the last concept within the regional factors is. Results show that there is no evidence for the monocentric view. Regions with a higher number of municipalities do not show higher transaction costs or lower local and regional benefits.

The results regarding the network factors show that there is no evidence for the monocentric view on regional governance. This is in line with the findings by Boogers et al. (2016). There is no evidence that transaction costs increase and the local and regional benefits decrease with the complexity of a region. There is a significant relation between the number of net partners and the incongruence in COROP region and the transaction costs. Transaction costs decrease when the number of net partners and the incongruence increase. This evidence could imply that well organized (but complex) intermunicipal cooperation structures report lower transaction costs. Despite the fact that there is no evidence for the monocentric view, the polycentric view could not be confirmed.

Both monocentric and polycentric advocates of regional governance structures acknowledge a decent quality of the interaction between municipalities. Evidence shows

a significant relation between the transaction costs and the quality of interaction. Transaction costs decrease when the trust and consensus, and decisiveness increase. Significant relations exist between the local and regional benefits and the decisiveness. Local benefits in COROP regions increase when the decisiveness increases and regional benefits in COROP and FUA region increase when the decisiveness increases. The confirmation of the hypothesis regarding the quality of interaction is line with the findings by Boogers et al. (2016).

Where as the two opposing views on regional governance agree on the importance of the quality of interaction, the two views stress a different role for the network factors towards the quality of interaction. Advocates of the monocentric view suggest that complexity has a negative influence towards the quality of interaction. Polycentric advocates suggest a positive influence. Results show that there is no support for the monocentric view. There is no evidence that complexity negatively influences the quality of interaction. Significant relations are found between the decisiveness, trust and consensus and the incongruence in regions; decisiveness (in both types of regions) and trust and consensus (in FUA regions) increases when incongruence increases.

Besides focusing on the structural feature (population size) of a lead municipality, the combination of trust, the number of municipalities in a region and the presence of a lead municipality was taken into account to determine the influence of this combination of factors on the intermunicipal cooperation performance. Results show that regions with a lead municipality report lower transaction costs compared to regions without a lead municipality (given the same level of trust and number of participants). The expected most favourable combination of factors shows the highest local and regional benefits in regions with a lead municipality. However, the difference in reported local and regional benefits is not significant. Regions without a lead municipality do not report this expectation.

Despite the difference in age and coverage of municipalities in Netherlands, COROP and FUA regions do not differ significantly considering the results presented in this thesis. The general results regarding the variables show no significant differences. The results regarding the correlation analysis show that the correlation between the net partners

and incongruence, and transaction costs is significant for COROP regions and is not for FUA regions. The same could be stated for the significance of the correlation between decisiveness and local benefits in case of COROP regions.

The scarcity of scientific evidence does not contribute to a favourable climate for policy making regarding regional governance. On the basis of this thesis could be stated that public administrators (municipal, regional and national) should not choose for a monocentric approach towards regional governance questions. Results from this thesis disregard the monocentric view although could not confirm the polycentric view.

Public administrators should be aware of that there is no significant relation between the structural features of regions and the performance of intermunicipal cooperation. This would imply that features as geographical and population size, and the number of municipalities in a region should not be of major importance in the formation of regions. As previous stated, with no support for the monocentric view, the complexity of an intermunicipal cooperation network should not be regarded as negative. Therefore, well organized intermunicipal cooperation networks could have the possibility to generate favourable intermunicipal cooperation performance.

With a significant relation between the quality of interaction and the performance of intermunicipal cooperation, public administrators should take trust and consensus, and decisiveness into account in making cooperation structures between municipalities. Public administrators should therefore devote serious attention to their cooperating municipalities and the relations they have with these municipalities. Transparent processes of cooperation and involvement of all participating municipalities is significant.

Public administrators should also consider the role of a leading municipality in a region or the relationship between the urban core of a region and its surroundings. Evidence from this thesis shows that region with a lead municipality report lower transaction costs than region without a lead municipality. Intermunicipal cooperation networks could therefore possibly benefit from the presence of lead municipality.

With the theoretical and practical contribution to public administration, it is important to consider the limitations of this thesis. The first limitation concerns the dependent variable. The performance of intermunicipal cooperation was based on the perceptions of municipal secretaries. This limits the research since it is not an objective measure and could therefore question the validity of the inquiry. The second limitation concerns the causality of the research. Due to the fact that the results are based on a correlation analysis, it is difficult to determine the direction of causality. As stated previously, the performance of intermunicipal cooperation increases when the quality of interaction does. However, it could also be the other way around. Quality of interaction increases when municipalities generate more favourable results regarding cooperation. Considering these limitations it would be interesting in subsequent research to apply a more objective measure of intermunicipal cooperation performance. Another research direction worth considering is to apply the variables mentioned in this thesis to other NUTS-3 (European Union equivalent of COROP regions) or FUA regions.

## References

### Academic Journals

- Ansell, C., & Gash, A. (2007). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, 18(4), 543-571. doi:10.1093/jopart/mum032
- Bel, G., & Warner, M. E. (2014). Inter-municipal cooperation and transaction costs: expectations and evidence. *Public Administration*, 93(1), 52-67. doi:10.1111/padm.12104
- Bel, G., & Warner, M. E. (2015). Factors explaining inter-municipal cooperation in service delivery: a meta-regression analysis. *Journal of Economic Policy Reform*, 19(2), 91-115. doi:10.1080/17487870.2015.1100084
- Feiock, R. C. (2007). Rational choice and regional governance. *Journal of Urban Affairs*, 29(1), 47-63. doi:10.1111/j.1467
- Feiock, R. C., In Won Lee, Hyung Jun Park, & Lee, K. (2010). Collaboration Networks Among Local Elected Officials: Information, Commitment, and Risk Aversion. *Urban Affairs Review*, 46(2), 241-262. doi:10.1177/1078087409360509
- Jacobsen, D. I. (2014). Regional Governance Networks: Filling In or Hollowing Out? *Scandinavian Political Studies*, 38(2), 115-136. doi:10.1111/1467-9477.12037
- Kenis, P.N., Provan, & K.G. (2009). Towards an exogenous theory of public network performance. *Public Administration* 87(3) 440-456. doi: 10.1111/j.1467-9299.2009.01775.x
- Lubell, M., Schneider, M., Scholz, J. T., & Mete, M. (2002). Watershed Partnerships and the Emergence of Collective Action Institutions. *American Journal of Political Science*, 46(1), 148. doi:10.2307/3088419
- O'Toole, L. J. (1997). Treating Networks Seriously: Practical and Research-Based Agendas in Public Administration. *Public Administration Review*, 57(1), 45. doi:10.2307/976691
- Provan, K. G., & Kenis, P. (2008). Modes of Network Governance: Structure, Management, and Effectiveness. *Journal of Public Administration Research and Theory*, 18(2), 229-252. doi:10.1093/jopart/mum015
- Provan, K. G., & Milward, H. B. (1999) Do networks really work?: a framework for evaluating public-sector organizational networks. *Academy of Management Proceedings*, 1999(1), A1-A6. doi:10.5465/apbpps.1999.27628083
- Tavares, F., & Feiock, R. C. (2014). Intermunicipal cooperation and regional governance in Europe: an institutional collective action framework. Paper presented at European Consortium for Political Research, Glasgow.

### Books

- Easley, D., & Kleinberg, J. (2010). Networks, crowds, and markets: Reasoning about a highly connected world. New York: Cambridge University Press.
- Feiock, R. C. (2004). Metropolitan governance: conflict, competition, and cooperation. Washington, DC: Georgetown University Press

Feiock, R. C. (2008). Institutional collective action and local government cooperation. In: Bingham, L., & O'Leary, R. Big ideas in collaborative public management. London: Routledge.

Kenneth J. Meier and Laurence J. O'Toole Jr. (2012). Managerial networking, managing the environment, and programme performance: a summary of findings and an agenda. In: Walker, R. M., Boyne, G. A., & Brewer, G. A. Public Management and Performance: research directions. Cambridge: Cambridge University Press.

McAfee, R. P. (2006). Introduction to economic analysis. Pasadena, CA: California Institute of Technology.

## Documents

Brezzi, M., & Organisation for Economic Co-operation and Development. (2012). Redefining "urban": A new way to measure metropolitan areas. Paris.

Boogers, M., Klok, P. J., Denters, B., & Sanders, M. (2016). Effecten van regionaal bestuur voor gemeenten. Universiteit Twente, Enschede.

Eurostat. (2015). Regions in the European Union. Publications Office of the European Union. Luxembourg.

Kan, J., Van Genugten, M., Lunsing, J. R., & Herweijer, M. (2014). Verborgene Krachten. Over de bestuurskracht van vijf typen gemeenten. Radboud Universiteit, Nijmegen.

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2013). Bestuur in samenhang. De bestuurlijk organisatie in Nederland.

Swianiewicz, P. (2011). Working Together: Intermunicipal Cooperation in Five Central European Countries. Budapest: Open Society Institute.

## Websites

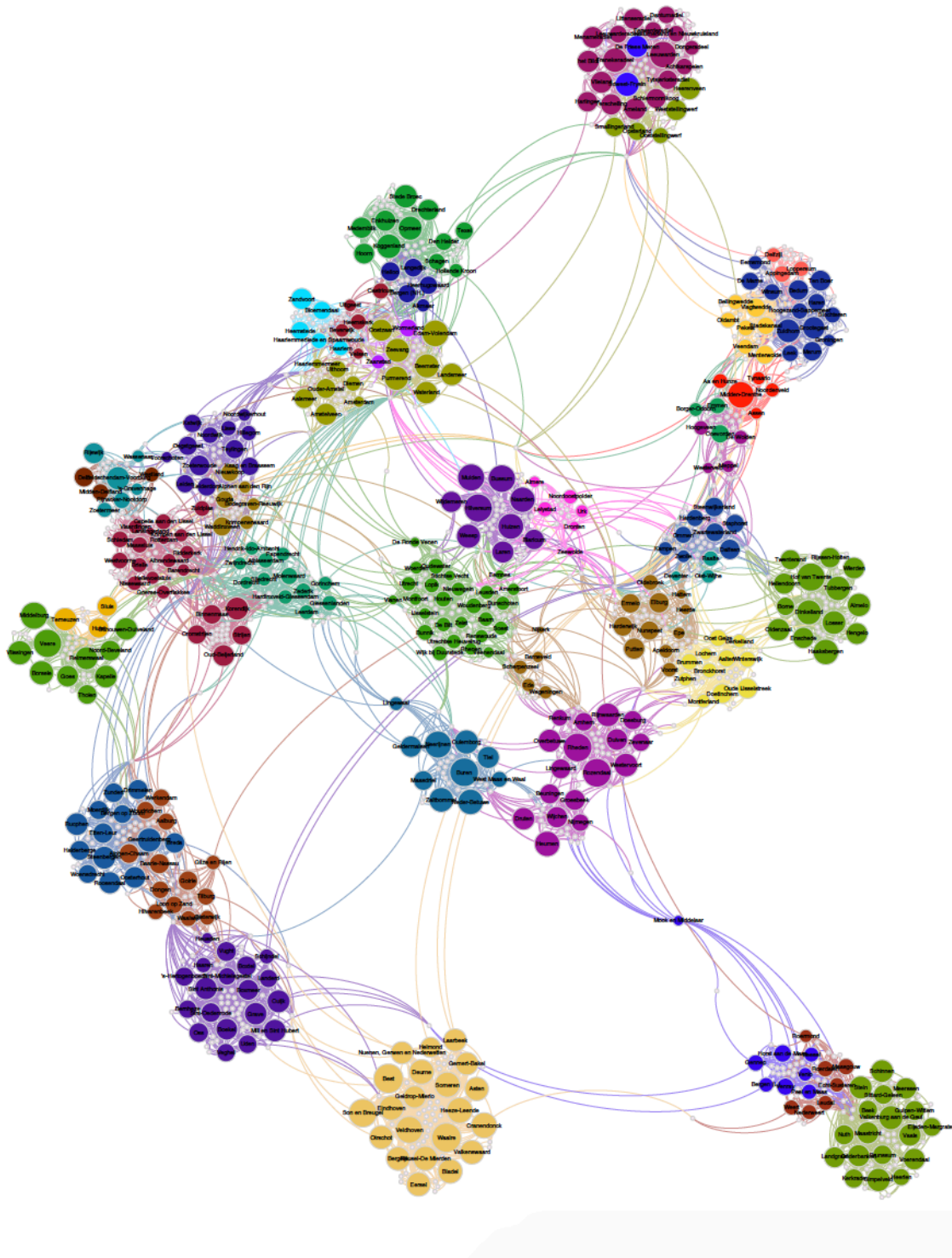
CBS, (2017). Gemeentelijke indeling op 1 januari 2017. Retrieved from <https://www.cbs.nl/nl-nl/onze-diensten/methoden/classificatie/overig/gemeentelijke-indelingen/indeling%20per%20jaar/gemeentelijke-indeling-op-1-januari-2017>

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, (N.D.). COROP regio's. Retrieved from [http://www.regioatlas.nl/indelingen/indelingen\\_indelingen/t/corop\\_regio\\_s](http://www.regioatlas.nl/indelingen/indelingen_indelingen/t/corop_regio_s)

Rijksoverheid, (2017). Taken van een gemeente. Retrieved from <https://www.rijksoverheid.nl/onderwerpen/gemeenten>

# Appendix A

COROP regions with municipalities and intermunicipal cooperation ties. Coloured nodes represent municipalities; the edges represent the cooperation ties.



## Appendix B

FUA regions with municipalities and intermunicipal cooperation ties. Coloured nodes represent municipalities; the edges represent the cooperation ties. FUA region 1 (Amsterdam) are the orange nodes in the top left of the map.

